Do Not KERNUG

OWNER'S MANUAL

MODEL NUMBER X1844A

18.0 HORSEPOWER
44" MOWER
6 SPEED
YARD TRACTOR

- Assembly
 - Operation
 - Customer Responsibilities
 - Service and Adjustments
 - Repair Parts

For Parts and Service, contact our authorized distributor: in the U. S., call 1-800-849-YARD; in Canada, call 1-800-263-0660



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139700 Rev. 1 5.18.93 Printed in the U.S.A.



SAFETY RULES

Safe Operation Practices for Ride-On Mowers



IMPORTANT: THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

GENERAL OPERATION

- Read, understand, and follow all instructions in the manual and on the machine before starting.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers,
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- · Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- · Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.

II. SLOPE OPERATION

Slopes are a major factor related to loss-of-control and tipover accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

DO:

- Mow up and down slopes, not across.
- · Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
- Use extra care with grass catchers or other attachments.
 These can change the stability of the machine.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.

DO NOT

- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not use grass catcher on steep slopes.

III. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- · Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

IV. SERVICE

- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
 - Use only an approved container.
 - Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
 - Never refuel the machine indoors.
 - Never store the machine or fuel container inside where there is an open flame, such as a water heater.
- Never run a machine inside a closed area.
- Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running.
- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.



Look for this symbol to point out important safety precautions. It means CAUTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.



CAUTION: Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.

CONGRATULATIONS on your purchase of a new tractor. It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest authorized service center. We have competent, well-trained technicians and the proper tools to service or repair this tractor.

Please read and retain this manual. The instructions will enable you to assemble and maintain your tractor properly. Always observe the "SAFETY RULES".

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CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your tractor.
- Follow the instructions under "Customer Responsibilities" and "Storage" sections of this manual.

PRODUCT SPECIFICATIONS

HORSEPOWER:	18.0
GASOLINE CAPACITY:	3.5 GALLONS UNLEADED REGULAR
OIL (3.0 PINTS):	SAE 30 (above 32° F) SAE 5W-30 (below 32° F)
SPARK PLUG (GAP.025 IN.):	CHAMPION RJ19LM
VALVE CLEARANCE:	INTAKE .004006 IN . EXHAUST .007009 IN.
GROUND SPEED:	FORWARD: 1st .71 MPH 2nd 1.05 MPH 3rd 1.82 MPH 4th 3.24 MPH 5th 4.12 MPH 6th 5.29 MPH REVERSE: 1.62 MPH
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	5 AMPS BATTERY 5 AMPS HEADLIGHTS
BLADE BOLT TORQUE:	30-35 FT. LBS.

WARNING: This tractor is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest authorized service center (See REPAIR PARTS section of this manual).

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LIMITED WARRANTY

The Manufacturer warrants to the original consumer purchaser that this product as manufactured is free from defects in materials and workmanship. For a period of two (2) years from date of purchase by the original consumer purchaser, we will repair or replace, at our option, without charge for parts or labor incurred in replacing parts, any part which we find to be defective due to materials or workmanship. This Warranty is subject to the following limitations and exclusions.

- This warranty does not apply to the engine, transaxle/transmission components, battery (except as noted below) or components parts thereof. Please refer to the applicable manufacturer's warranty on these items.
- Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by American Yard Products, Inc.
- 3. Battery Warranty: On products equipped with a Battery, we will replace, without charge to you, any battery which we find to be defective in manufacture, during the first ninety (90) days of ownership. After ninety (90) days, we will exchange the Battery, charging you 1/12 of the price of a new Battery for each full month from the date of the original sale. Battery must be maintained in accordance with the instructions furnished.
- 4. The Warranty period for any products used for rental or commercial purposes is limited to 90 days from the date of original purchase.
- 5. This Warranty applies only to products which have been properly assembled, adjusted, operated, and maintained in accordance with the instructions furnished. This Warranty does not apply to any product which has been subjected to alteration, misuse, abuse, improper assembly or installation, delivery damage, or to normal wear of the product.
- 6. Exclusions: Excluded from this Warranty are belts, blades, blade adapters, normal wear, normal adjustments, standard hardware and normal maintenance.
- 7. In the event you have a claim under this Warranty, you must return the product to an authorized service dealer.

Should you have any unanswered questions concerning this Warranty, please contact:

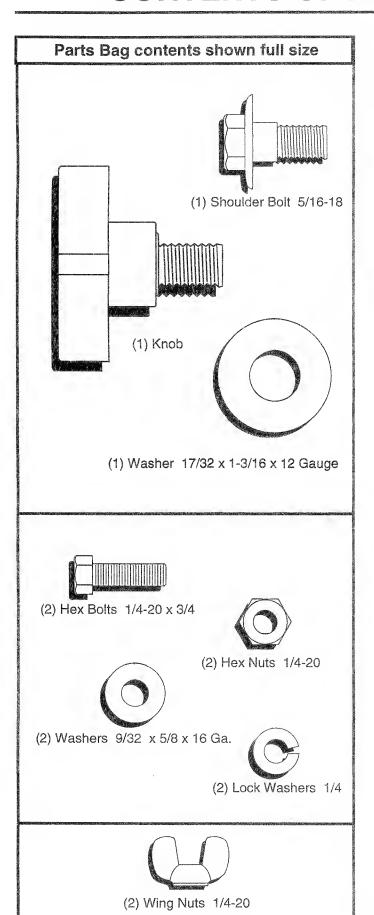
American Yard Products, Inc. Service Department P.O. Box 1687 Orangeburg, SC 29116 USA In Canada contact:
AYP Canada, Inc.
1040 Jayson Court
Mississauga, Ontario
L4W 2V5

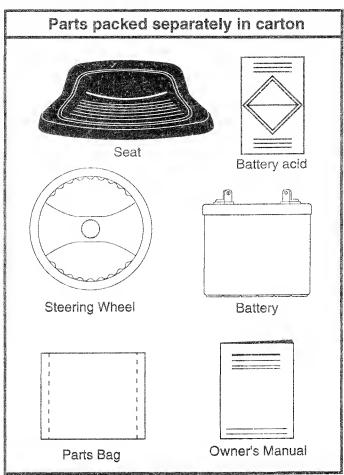
giving the model number, serial number and date of purchase of your product and the name and address of the authorized dealer from whom it was purchased.

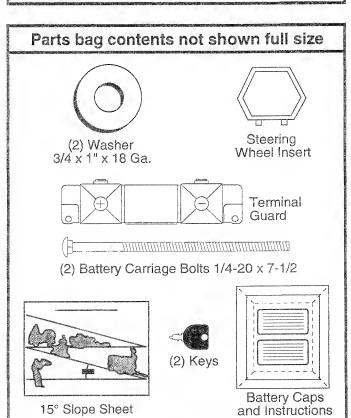
THIS WARRANTY DOES NOT APPLY TO INCIDENTAL OR CONSEQUENTIAL DAMAGES AND ANY IMPLIED WARRANTIES ARE LIMITED TO THE SAME TIME PERIODS STATED HEREIN FOR OUR EXPRESSED WARRANTIES. Some areas do not allow the limitation of consequential damages or limitations of how long an implied Warranty may last, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from locale to locale.

This is a limited Warranty within the meaning of that term as defined in the Magnuson-Moss Act of 1975.

CONTENTS OF HARDWARE PACK







Your new tractor has been assembled at the factory with exception of those parts left unassembled for shipping puposes. To ensure safe and proper operation of your tractor all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to insure proper tightness.

TOOLS REQUIRED FOR ASSEMBLY

A socket wrench set will make assembly easier. Standard wrench sizes are listed.

- (2) 7/16" wrenches
- (1) Tire pressure gauge
- (1) 3/4" wrench
- (1) Utility knife
- (1) Adjustable wrench

When right and left hand is mentioned in this manual, it means when you are in the operating position (seated behind the steering wheel).

TO REMOVE TRACTOR FROM CARTON UNPACK CARTON

- Remove all accessible loose parts and parts cartons from carton (See page 6).
- Cut along lines on the carton, from top to bottom, all four corners of carton and lay panels flat.
- Remove mower deck from skid.
- Check for any additional loose parts or cartons and remove.

BEFORE ROLLING UNIT OFF SKID ATTACH STEERING WHEEL (See Fig. 1)

- Remove locknut and large flat washer from steering shaft.
- Position front wheels of the tractor so they are pointing straight forward.
- Position steering wheel so cross bars are horizontal (left to right) and slide onto adapter.
- Secure steering wheel to steering shaft with locknut and large flat washer previously removed. Tighten securely.
- Snap steering wheel insert into center of steering wheel.
- Remove protective plastic from tractor hood and grill.
 IMPORTANT: CHECK FOR AND REMOVE ANY STAPLES
 IN SKID THAT MAY PUNCTURE TIRES WHERE UNIT IS
 TO ROLL OFF SKID.

TO ROLL UNIT OFF SKID (See Fig. 10)

- Raise attachment lift lever to its highest position.
- Release parking brake by depressing clutch/brake pedal.
- Place gearshift lever in "NEUTRAL" position.
- Roll tractor backwards off skid.

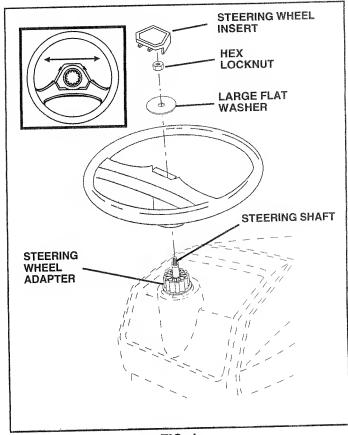


FIG. 1

HOW TO SET UP YOUR TRACTOR PREPARE BATTERY (See Fig. 2)

CAUTION: Wear eye and face shield.

Wash hands or clothing immediately if accidentally in contact with battery acid.

Do not smoke. Fumes from charged battery acid are explosive.

Read the instructions included with the battery vent caps. Always wear gloves, clothing and goggles to protect your hands, skin and eyes.

Your tractor has a battery charging system which is sufficient for normal use. However, periodic charging of the battery with an automotive charger will extend its life.

- See instructions packed with vent caps in parts bag.
- Fill battery with acid. Fill each cell until it reaches the bottom of the vent wells. Do not overfill.
- Allow battery to stand and settle for at least thirty minutes. After standing, check the level of acid. If below the vent wells, add more acid until the correct level is reached.

While battery is standing (after adding acid) and later, while battery is being charged, continue with assembly of tractor.

IMPORTANT: TO MAXIMIZE THE LIFE OF YOUR BATTERY, IT IS NECESSARY THAT THE BATTERY BE CHARGED BEFORE USE. FAILURE TO CHARGE BATTERY CAN RESULT IN A SHORTENED BATTERY LIFE.

- Charge battery at a rate of 6 amperes for 1 hour. Use a 12 volt battery charger. Observe all safety precautions required for battery charging.
- Check the acid level after the battery is charged. If the acid has fallen below the correct level, add distilled or iron free water.
- Install the vent caps to cover the vent wells. Wash the top of the battery with water to remove any acid, then wipe dry.
- Check battery case for leakage to make sure that no damage has occurred in handling.
- Dispose of excess battery acid. Neutralize acid for disposal by adding it to four inches of water in a five gallon plastic container. Stir with a wooden or plastic paddle while adding baking soda until the addition of more soda causes no more foaming.
- · Follow instructions on how to install battery.

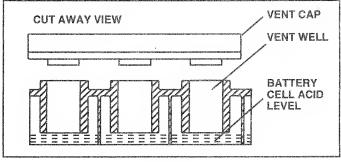


FIG. 2

INSTALL SEAT (See Fig. 3)

Adjust seat before tightening adjustment knob.

- Remove cardboard packing on seat pan.
- Place seat on pan and assemble shoulder bolt.
- Assemble adjustment knob and flat washer loosely. Do not tighten.
- Tighten shoulder bolt securely.
- Lower seat into operating position and sit on seat.
- Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- Get off seat without moving its adjusted position.
- Raise seat and tighten adjustment knob securely.

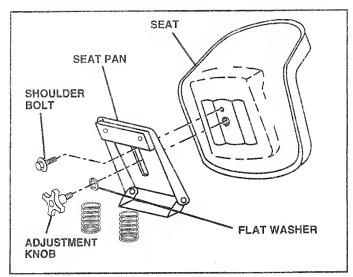


FIG. 3

CHECK TIRE PRESSURE

The tires on your tractor were overinflated at the factory for shipping purposes. Correct tire pressure is important for best cutting performance.

 Reduce tire pressure to PSI shown in "PRODUCT SPECIFICATIONS" on page 3 of this manual.

INSTALL MOWER (See Figs. 4, 5, 6 & 7)

- Remove banding holding parallel link up against tractor.
- Remove retainer securing long hinge pin to parallel link and remove hinge pin.
- Raise attachment lift lever to its highest position.
- Remove banding from mower deck links and V-belt.
- Slide mower under tractor with discharge guard to right side of tractor.
- Attach front of mower to parallel link with long hinge pin.
 Secure hinge pin with retainer spring.
- Turn height adjustment knob to its lowest setting.
- Lower attachment lift lever to lower suspension arms.
 Remove retainer springs from lift trunnions.
- Slide trunnions through upper hole in lift brackets and secure with retainer springs.
- Pull L.H. idler pulley toward the right hand side of tractor and roll belt over mower drive pulley.

NOTE: Mower drive belt installation decal located on mower housing.

- Raise attachment lift lever to raise mower.
- Turn height adjustment knob clockwise to the middle of its travel.

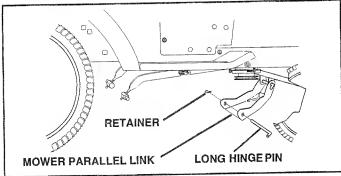


FIG. 4

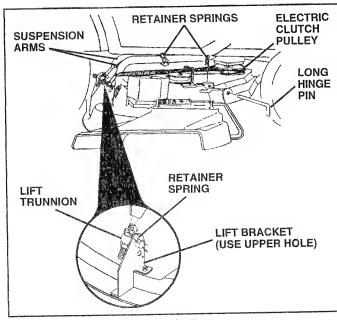


FIG. 5

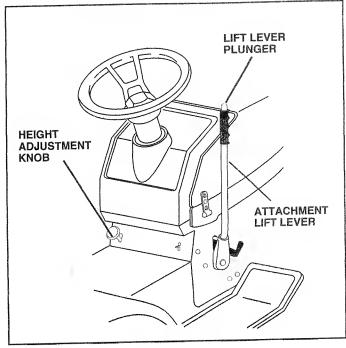


FIG. 6

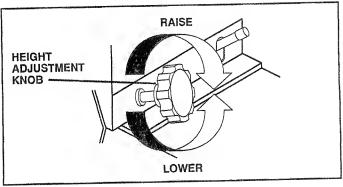


FIG. 7

CHECK DECK LEVELNESS

For best cutting results, mower housing should be properly leveled. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.

CHECK FOR PROPER POSITION OF ALL BELTS

See the figures that are shown for replacing motion, mower drive, and mower blade drive belts in the Service and Adjustments section of this manual. Verify that the belts are routed correctly.

CHECK BRAKE SYSTEM

After you learn how to operate your tractor, check to see that the brake is properly adjusted. See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual.

INSTALL BATTERY (See Figs. 8 & 9)



CAUTION: Do not short battery terminals. Before installing battery, remove metal bracelets, wristwatch bands, rings, etc.

Positive terminal must be connected first to prevent sparking from accidental grounding.

- Lift hood to raised position.
- Lower battery into battery tray with terminals to rear of tractor.
- Be sure battery drain tube has not come loose and is securely attached to drain in battery tray.
- First connect RED battery cable to positive (+) battery terminal with hex bolt, flat washer, lock washer and hex nut as shown. Tighten securely.
- Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt, flat washer, lock washer and hex nut. Tighten securely.
- Place terminal guard onto the battery, covering the terminals.
- Slide one (1) 1" washer onto battery bolt. Slide bolt up through key hole, through terminal guard and thread wing nut onto bolt. Do not tighten.
- Repeat for opposite side.
- Tighten wing nuts while making sure the square shafts of the bolts are into the slots of keyholes. By hand only, tighten securely.
- Be sure terminal access doors are closed.

Use terminal access doors for:

- Inspection for secure connections (to tighten hardware).
- Inspection for corrosion.
- Testing battery.
- Periodic charging.

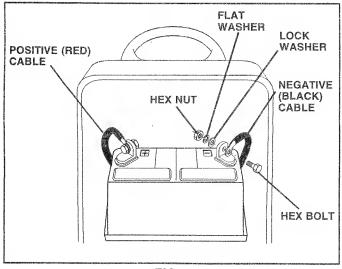


FIG. 8

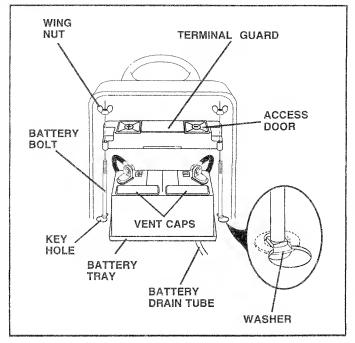


FIG. 9

J CHECKLIST

BEFORE YOU OPERATE AND ENJOY YOUR NEW TRACTOR, WE WISH TO ASSURE THAT YOU RECEIVE THE BEST PERFORMANCE AND SATISFACTION FROM THIS QUALITY PRODUCT.

PLEASE REVIEW THE FOLLOWING CHECKLIST:

- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated at the factory).
- ✓ Be sure mower deck is properly leveled side-to-side/ front-to-rear for best cutting results. (Tires must be properly inflated for leveling)
- Check mower and drive belts. Be sure they are routed properly around pulleys and inside all belt keepers.
- Check wiring. See that all connections are still secure and wires are properly clamped.

WHILE LEARNING HOW TO USE YOUR TRACTOR, PAY EXTRA ATTENTION TO THE FOLLOWING IMPORTANT ITEMS:

- Engine oil is at proper level.
- ✓ Fuel tank is filled with fresh, clean, regular unleaded gasoline.
- Become familiar with all controls their location and function. Operate them before you start the engine.
- Be sure brake system is in safe operating condition.

KNOW YOUR TRACTOR READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR TRACTO

Compare the illustrations with your tractor to familiarize yourself with the location of various controls and adjustments. Satthis manual for future reference.

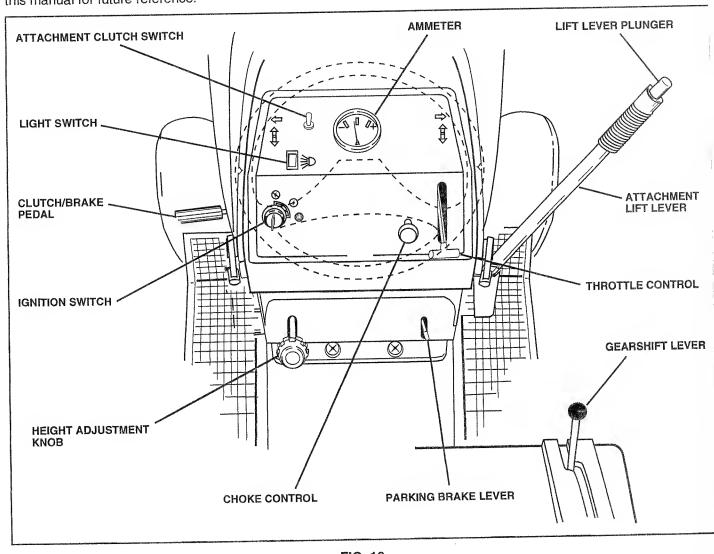


FIG. 10

Your tractor conforms to the safety standards of the American National Standards Institute.

ATTACHMENT CLUTCH SWITCH - Used to engage mower blades or other attachments mounted to your tractor.

ATTACHMENT LIFT LEVER - Used to raise and lower mower deck or other attachments mounted to your tractor. CLUTCH/BRAKE PEDAL - Used for declutching and braking the tractor and starting the engine.

HEIGHT ADJUSTMENT KNOB - Used to adjust the mower height

LIFT LEVER PLUNGER - Used to release attachment lift lever when changing its position.

GEARSHIFT LEVER - Selects the speed and direction (the tractor.

IGNITION SWITCH - Used to start and stop the engine LIGHT SWITCH - Turns the headlights on and off.

PARKING BRAKE LEVER - Locks clutch/brake pedal int

the brake position.

THROTTLE CONTROL - Used to control engine speed CHOKE CONTROL - Used when starting a cold engine.

AMMETER - Indicates charging (+) or discharging (-) c battery.



The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before starting your tractor and while moving. We recommend wide vision safety mask for over the spectacles or standard safety glasses.

IN TO USE YOUR TRACTOR SET PARKING BRAKE (See Fig. 11)

Depress clutch/brake pedal into full "BRAKE" position and hold.

Place parking brake lever in "ENGAGED" position and release pressure from clutch/brake pedal. Pedal should remain in "BRAKE" position. Make sure parking brake will hold tractor secure.

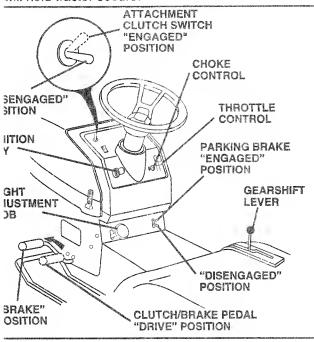


FIG. 11

OPPING (See Fig. 11)

WER BLADES -

Move attachment clutch switch to "DISENGAGED" position.

DUND DRIVE -

Depress clutch/brake pedal into full "BRAKE" position. Move gear shift lever to "NEUTRAL" position. SINE -

Move throttle control to "SLOW" position.

FE: Failure to move throttle control to "SLOW" position allowing engine to idle before stopping may cause ine to "backfire".

Turn ignition key to "OFF" position and remove key. Always remove key when leaving tractor to prevent unauthorized use.

Never use choke to stop engine.

FE: Under certain conditions when unit is standing idle the engine running, hot engine exhaust gases may se "browning" of grass. To eliminate this possibility, ays stop engine when stopping tractor on grass areas.



CAUTION: Always stop tractor completely, as described above, before leaving the operator's position; to empty grass catcher, etc.

TO USE CHOKE CONTROL (See Fig. 11)

Use choke control whenever you are starting a cold engine. Do not use to start a warm engine.

 To engage choke control, pull knob out. Slowly push knob in to disengage.

TO USE THROTTLE CONTROL (See Fig. 11)

Always operate engine at full throttle.

- Operating engine at less than full throttle reduces the battery charging rate.
- Full throttle offers the best mower performance.

TO MOVE FORWARD AND BACKWARD (See Fig. 11)

The direction and speed of movement is controlled by the gearshift lever.

- Start tractor with clutch/brake pedal depressed and gearshift lever in "NEUTRAL" position.
- Move gearshift lever to desired position.
- Slowly release clutch/brake pedal to start movement.
 IMPORTANT: BRING TRACTOR TO A COMPLETE STOP BEFORE SHIFTING OR CHANGING GEARS. FAILURE TO DO SO WILL SHORTEN THE USEFUL LIFE OF YOUR TRANSAXLE.

TO ADJUST MOWER CUTTING HEIGHT (See Fig. 11)

The cutting height is controlled by turning the height adjustment knob in desired direction.

- Turn knob clockwise (→) to raise cutting height.
- Turn knob counterclockwise () to lower cutting height.

The cutting height range is approximately 1-1/4" to 3-3/4". The heights are measured from the ground to the blade tip with the engine not running. These heights are approximate and may vary depending upon soil conditions, height of grass and types of grass being mowed.

- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first cut relatively high; the second to desired height.

TO OPERATE MOWER (See Figs. 10 and 11)

Your unit is equipped with an operator presence sensing switch. Any attempt by the operator to leave the seat with the engine running and the mower clutch engaged will shut off the engine.

- Select desired height of cut.
- · Lower mower with attachment lift control.
- Start mower blades by engaging attachment clutch control.
- TO STOP MOWER BLADES disengage attachment clutch control.



CAUTION: Do not operate the mower without either the entire grass catcher, on mowers so equipped, or the discharge guard in place.

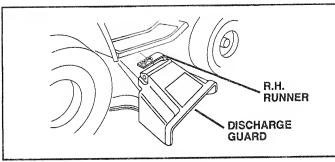


FIG. 12

TO OPERATE ON HILLS



CAUTION: Do not drive up or down hills with slopes greater than 15° and do not drive across any slope.

- Choose the slowest speed before starting up or down hills
- Avoid stopping or changing speed on hills.
- If slowing is necessary, move throttle control to slower position.
- If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake
- Move gearshift lever to "NEUTRAL" position.
- To restart movement, move gearshift lever to 1st gear.
 Be sure you have allowed room for tractor to roll slightly as you restart movement.
- Slowly release parking brake and clutch/brake pedal.
- Make all turns slowly.

TO TRANSPORT

- Raise attachment lift control to highest position.
- When pushing or towing your tractor, be sure gearshift lever is in "NEUTRAL" position.
- Do not push or tow tractor at more than five (5) MPH.

NOTE: To protect hood from damage when transporting your tractor on a truck or a trailer, be sure hood is closed and secured to tractor. Use an appropriate means of tying hood to tractor (rope, cord, etc.).

BEFORE STARTING THE ENGINE

CHECK ENGINE OIL LEVEL (See Fig. 13)

- The engine in your unit has been shipped, from the factory, already filled with summer weight oil.
- · Check engine oil with unit on level ground.
- Remove oil fill cap/dipstick and wipe clean, reinsert the dipstick and screw cap tight, wait for a few seconds, remove and read oil level. If necessary, add oil until "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See "OIL VISCOSITY CHART" in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

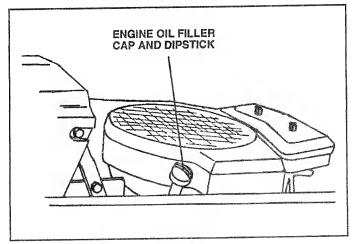


FIG. 13

ADD GASOLINE

 Fill fuel tank. Use fresh, clean, regular unleaded gasoline. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life).

IMPORTANT: WHEN OPERATING IN TEMPERATURES BELOW 32°F(0°C), USE FRESH, CLEAN WINTER GRADE GASOLINE TO HELP INSURE GOOD COLD WEATHER STARTING.

WARNING: Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.



CAUTION: Fill to bottom of gas tank filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

TO START ENGINE (See Fig. 11)

When starting engine for the first time or if engine has run out of fuel, it will take extra cranking time to move fuel from the tank to the engine.

- Depress the clutch/brake pedal and set the parking brake.
- Place gearshift lever in "NEUTRAL" position.
- · Move attachment clutch to "DISENGAGED" position.
- Pull choke control out to "CHOKE" position for cold engine start. For warm engine start do not use choke control.
- Move throttle control to midway between "FAST" and "SLOW" positions.
- Turn ignition key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If engine does not start after several attempts, move throttle control to "FAST" position, wait a few minutes and try again.
- When engine starts, slowly push choke control in.
- Move throttle control to "FAST" position.
- Allow engine to warm up for a few minutes before engaging clutch/brake pedal or attachment clutch switch.

NOTE: If at a high altitude (above 3000 feet) or in cold temperatures (below 32° F), the carburetor fuel mixture may need to be adjusted for best engine performance. See "TO ADJUST CARBURETOR" in the Service and Adjustments section of this manual.



CAUTION: Before driving the tractor, install mower or remove front mower suspension bracket and suspension arms.

MOWING TIPS

- Tire chains cannot be used when the mower housing is attached to tractor.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- Use the runner on the right hand side of mower as a guide. The blade cuts approximately an inch outside the runner (See Fig. 12).
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has been cut. Have the cut area to the right of the tractor. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished (See Fig. 14).
- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

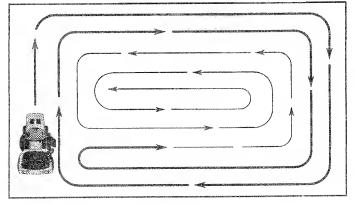


FIG. 14

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	Check Tire Pressure	V	ļ	6	ļ						 -	
I	Check for Loose Fasteners	V		ļ					8		 _	MINOSON
R	Sharpen/Replace Mower Blades				4						_	
ACT OR	Lubrication Chart				V				8/			
	Check Battery Level/Recharge				8						 _	
	Clean Battery and Terminals		<u> </u>		8				1		 1	
	Check Transmission Cooling				6							
	Adjust Blade Belt(s) Tension						6 5					-
	Adjust Motion Drive Belt(s) Tension						V 5					
ONE CONTROL	Check Engine Oil Level	V		V								
	Change Engine Oil		W		1,2,3				Barre			
general Control	Clean Air Filter				2							
E	Clean Air Screen				W 2					9		
G	Inspect Muffler/Spark Arrester					5				2		~~
2446078	Replace Oil Filter (If equipped)						1,2					
N	Clean Engine Cooling Fins						2					
E	Replace Spark Plug						Section 1	8				
	Replace Air Filter Paper Cartridge						1 2 2					eropeanie.
	Replace Fuel Filter							200				

- 1 Change more often when operating under a heavy load or in high ambient temperatures.
- 2 Service more often when operating in dirty or dusty conditions.

- 3 If equipped with oil filter, change oil every 50 hours.
- 4 Replace blades more often when mowing in sandy soil.
- 5 If equipped with adjustable system.

GENERAL RECOMMENDATIONS

The warranty on this tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain tractor as instructed in this manual.

Some adjustments will need to be made periodically to properly maintain your tractor.

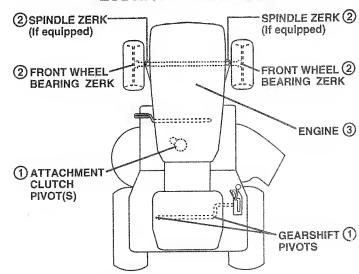
All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

 Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

BEFORE EACH USE

- Check engine oil level.
- Check brake operation.
- · Check tire pressure.
- · Check for loose fasteners.

LUBRICATION CHART



- 1) SAE 30 OR 10W30 MOTOR OIL API SG
- ② GENERAL PURPOSE GREASE
- (3) REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION

IMPORTANT: DO NOT OIL OR GREASE THE PIVOT POINTS WHICH HAVE SPECIAL NYLON BEARINGS. VISCOUS LUBRICANTS WILL ATTRACT DUST AND DIRT THAT WILL SHORTEN THE LIFE OF THE SELF-LUBRICATING BEARINGS. IF YOU FEEL THEY MUST BE LUBRICATED, USE ONLY A DRY, POW15 DERED GRAPHITE TYPE LUBRICANT SPARINGLY.

TRACTOR

Always observe safety rules when performing any maintenance.

BRAKE OPERATION

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, than brake must be adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

TIRES

- Maintain proper air pressure in all tires (See "PROD-UCT SPECIFICATIONS" on page 3 of this manual).
- Keep tires free of gasoline, oil, or insect control chemicals which can harm rubber.
- Avoid stumps, stones, deep ruts, sharp objects and other hazards that may cause tire damage.

BLADE CARE

For best results mower blades must be kept sharp. Replace bent or damaged blades.

BLADE REMOVAL (See Fig. 15)

- Raise mower to highest position to allow access to blades.
- Remove hex bolt, lock washer and flat washer securing blade.
- Install new or resharpened blade with trailing edge up towards deck as shown.
- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (30-35 Ft. Lbs. torque).
 IMPORTANT: BLADE BOLT IS GRADE 5 HEAT TREATED.

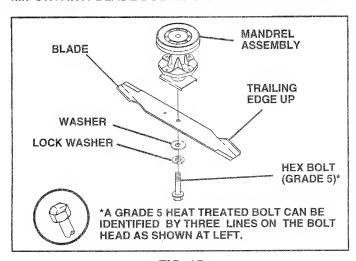


FIG. 15

TO SHARPEN BLADE (See Fig. 16)

Care should be taken to keep the blade balanced. An unbalanced blade will cause excessive vibration and eventual damage to mower and engine.

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check biade balance, drive a nail into a beam or wall. Leave about one inch of the straight nail exposed. Place center hole of blade over the head of the nail. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

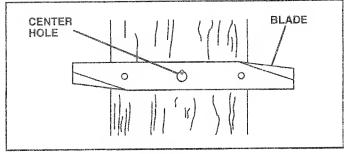


FIG. 16

BATTERY (See Fig. 17)

Your tractor has a battery charging system which is sufficient for normal use. However, periodic charging of the battery with an automotive charger will extend it's life.

- Acid solution level in each battery cell should be even with bottoms of vent wells. Add only distilled or iron free water if necessary. Do not overfill.
- Keep battery and terminals clean.
- Keep battery bolts tight.
- · Keep vent caps tight and small vent holes in caps open.
- · Recharge at 6 amperes for 1 hour.

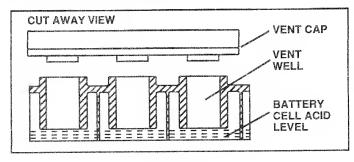


FIG. 17

TO CLEAN BATTERY AND TERMINALS -

Corrosion and dirt on the battery and terminals can cause the battery to "leak" power.

- Remove terminal guard.
- Disconnect BLACK battery cable first, then RED battery cable and remove battery from tractor.
- Wash battery with solution of four tablespoons of baking soda to one gallon of water. Be careful not to get the soda solution into the cells.
- · Rinse the battery with plain water and dry.
- Clean terminals and battery cable ends with wire brush until bright.
- Coat terminals with grease or petroleum jelly.
- Reinstall battery (See "INSTALL BATTERY" in the Assembly section of this manual).

V-BELTS

Check V-Belts for deterioration and wear after 100 hours and replace if necessary. The mower blade drive and motion drive belts are not adjustable. Replace belts if they begin to slip from wear.

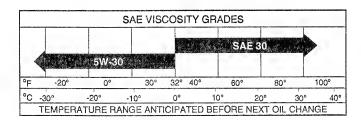
TRANSAXLE COOLING

Keep transaxle free from build-up of dirt and chaff which can restrict cooling.

ENGINE

LUBRICATION

Only use high quality detergent oil rated with API service classification SG. Select the oil's SAE viscosity grade according to your expected operating temperature.



NOTE: Although multi-viscosity oils (5W30, 10W30, etc.) improve starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32° F. Check your engine oil level more frequently to avoid possible engine damage from running low on oil.

Change the oil after the first two hours of operation and every 25 hours thereafter or at least once a year if the tractor is not used for 25 hours in one year.

Check the crankcase oil level before starting the engine and after each eight (8) hours of continuous use. Tighten oil fill cap/dipstick securely each time you check the oil level.

TO CHANGE ENGINE OIL (See Fig. 18)

Determine temperature range expected before oil change. All oil must meet API service classification SG.

- · Be sure tractor is on level surface.
- Oil will drain more freely when warm.
- Catch oil in a suitable container.
- Remove oil fill cap/dipstick. Be careful not to allow dirt to enter the engine when changing oil.
- · Remove drain plug.
- After oil has drained completely, replace oil drain plug and tighten securely.
- Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PRODUCT SPECIFICATIONS" on page 3 of this manual.
- Use gauge on dipstick for checking level. Be sure dipstick cap is tightened securely for accurate reading. Keep oil at "FULL" line on dipstick.

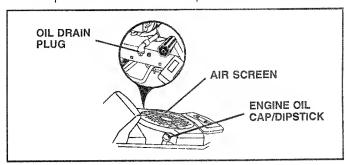


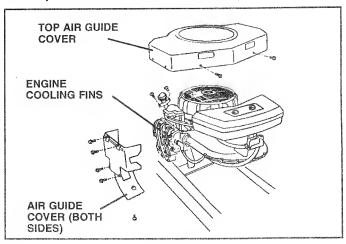
FIG. 18

CLEAN AIR SCREEN (See Fig. 18)

The air screen must be kept free of dirt and chaff to prevent engine damage from overheating. Clean with a wire brush or compressed air to remove dirt and stubborn dried gum fibers.

CLEAN ENGINE COOLING FINS (See Fig. 19)

Remove any dust, dirt or oil from engine cooling fins to prevent engine damage from overheating. Air guide covers must be removed. Remove side panels and hood (See "TO REMOVE HOOD AND GRILL ASSEMBLY" in the Service and Adjustments section of this manual).



AIR FILTER (See Fig. 20)

Your engine will not run properly using a dirty air filter. Clean the foam pre-cleaner element after every 25 hours of operation or every season. Service paper cartridge every 100 hours or every season, whichever occurs first.

Service air cleaner more often under dusty conditions.

Remove knob(s) and cover.

TO SERVICE PRE-CLEANER

- Slide foam pre-cleaner off cartridge.
- Wash it in liquid detergent and water.
- Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.
- Reinstall pre-cleaner over cartridge.
- Reinstall cover and secure with knob(s).

TO SERVICE CARTRIDGE

- Remove wing nuts and cartridge plate.
- Remove cartridge and clean by tapping gently on flat surface.
- If very dirty, replace or wash in a nonsudsing detergent and warm water solution. Rinse thoroughly with water from inside out until water runs clear. Let cartridge dry thoroughly before using.
- Reinstall cartridge plate, wing nuts, precleaner, cover and secure with knob(s).

IMPORTANT: PETROLEUM SOLVENTS, SUCH AS KEROSENE, ARE NOT TO BE USED TO CLEAN THE CARTRIDGE. THEY MAY CAUSE DETERIORATION OF THE CARTRIDGE. DO NOT OIL CARTRIDGE. DO NOT USE PRESSURIZED AIR TO CLEAN OR DRY CARTRIDGE.

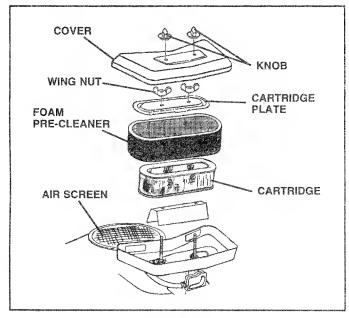


FIG. 20

MUFFLER

Inspect and replace corroded muffler and spark arrester (if equipped) as it could create a fire hazard and/or damage.

SPARK PLUGS

Replace spark plugs at the beginning of each mowing season or after every 100 hours of operation, whichever comes first. Spark plug type and gap setting are shown in "PRODUCT SPECIFICATIONS" on page 3 of this manual.

IN-LINE FUEL FILTER (See Fig. 21)

The fuel filter should be replaced once each season. If fuel filter becomes clogged, obstructing fuel flow to carburetor, replacement is required.

- With engine cool, remove filter and plug fuel line sections.
- Place new fuel filter in position in fuel line with arrow pointing towards carburetor.
- Be sure there are no fuel line leaks and clamps are properly positioned.
- Immediately wipe up any spilled gasoline.

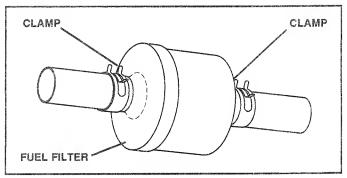


FIG. 21

CLEANING

- Clean engine, battery, seat, finish, etc. of all foreign matter.
- Keep finished surfaces and wheels free of all gasoline, oil, etc.
- Protect painted surfaces with automotive type wax.

We do not recommend using a garden hose to clean your tractor unless the electrical system, muffler, air filter and carburetor are covered to keep water out. Water in engine can result in a shortened engine life.

CAUTION: BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:



Depress clutch/brake pedal fully and set parking brake. Place gearshift lever in "NEUTRAL" position. Place attachment clutch in "DISENGAGED" position.

Turn ignition key "OFF" and remove key.

Make sure the blades and all moving parts have completely stopped.

Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with

TRACTOR

TO REMOVE MOWER (See Fig. 22)

Mower will be easier to remove from the right side of tractor.

- Remove mower drive belt from electric clutch pulley only (See "TO REPLACE MOWER DRIVE BELT" through step removing belt from electric clutch pulley).
- Pull retainer springs out of rear suspension trunnions. Remove rear suspension trunnions from lift brackets.
- Pull retainer springs from front hinge pins.
- Remove hinge pins attaching parallel link to mower and
- Raise lift lever to raise suspension arms. Slide mower out from under tractor.

IMPORTANT: IF AN ATTACHMENT OTHER THAN THE MOWER DECK IS TO BE MOUNTED ON THE TRACTOR, REMOVE THE L.H. AND R.H. SUSPENSION ARMS AND THE FRONT SUSPENSION BRACKET.

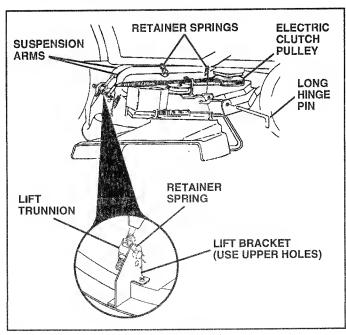


FIG. 22

TO INSTALL MOWER

See "INSTALL MOWER" in the Assembly section of this manual.

TO LEVEL MOWER HOUSING

Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PRODUCT SPECIFICATIONS" on page 3). If tires are over or underinflated, you will not properly adjust your

SIDE-TO-SIDE ADJUSTMENT (See Figs. 23 and 24)

- Raise attachment lift lever to its highest position.
- Measure height from bottom deck curl to ground level at front corners of mower. Distance "A" should be the
- If distance "A" needs to be changed, snap out access hole cover on left side of tractor above footrest.
- To raise left side of mower, loosen nut "B" and tighten nut "C".
- To lower left side of mower, loosen nut "C" and tighten nut "B".
- When distance "A" is equal, securely tighten nuts "B" and "C".
- Replace access hole cover.

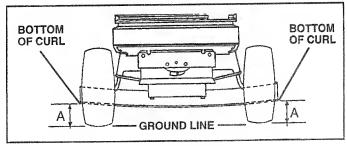


FIG. 23

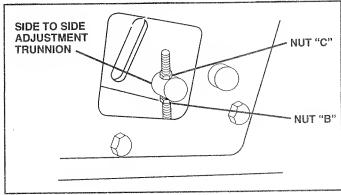


FIG. 24

FRONT-TO-BACK ADJUSTMENT (See Figs. 25 and 26) To obtain the best cutting results, the mower housing should be adjusted so the back is approximately 7/8" to 1-1/8" higher than the front when the mower is in height adjustment position.

Measure distance "D" from ground line to bottom of deck curl at centerline outside of mandrels.

- To raise rear of mower, loosen nut "E" on both rear suspension arms. Screw both nuts "F" on both rear suspension arms an equal number of turns.
- When distance "D" is 7/8" to 1-1/8" higher at rear than front, retighten nuts "E".
- Recheck side-to-side adjustment.

IMPORTANT: WHEN ADJUSTING REAR SUSPENSION ARMS, ALWAYS ADJUST BOTH EQUALLY SO MOWER WILL STAY LEVEL SIDE-TO-SIDE.

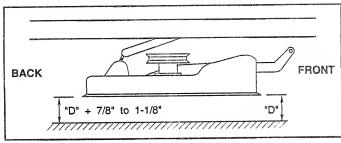


FIG. 25

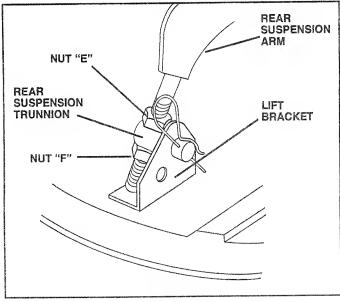


FIG. 26

TO ADJUST ATTACHMENT CLUTCH (See Fig. 27)

The electric clutch should provide years of service. The clutch has a built-in brake that stops the pulley within 5 seconds. Eventually, the internal brake will wear so the mower blades will not stop as recommended. Adjustments should be made by authorized service technician.

- Make sure attachment clutch and ignition switches are in the "OFF" position.
- Adjust the three nylon locknuts until the space between clutch plate and rotor measures .012 inches at all three slot locations cut in side of brake plate.

NOTE: After installing a new electric clutch, run tractor at full throttle, and engage and disengage electric clutch 10 cycles to wear in clutch plate.

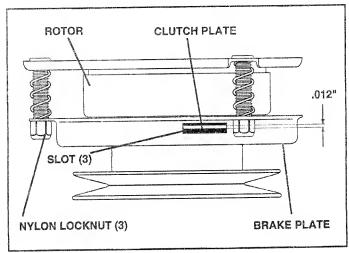


FIG. 27

TO REPLACE MOWER DRIVE BELT (See Figs. 28 and 29)

Park the tractor on level surface. Engage parking brake. BELT REMOVAL -

- Place attachment clutch in "DISENGAGED" position.
- Turn height adjustment knob to lowest setting.
- Move attachment lift lever forward to lower mower to its lowest position.
- Roll belt off electric clutch pulley.
- Pull belt off mower pulley and both idler pulleys.

BELT INSTALLATION -

- Place belt around mower pulley and both idler pulleys.
- Roll belt over electric clutch pulley.
- Make sure belt is in all pulley grooves and inside all belt guides.

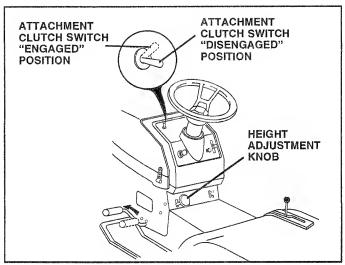


FIG. 28

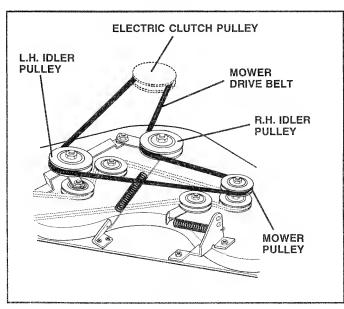


FIG. 29

TO ADJUST BRAKE (See Fig. 30)

Your tractor is equipped with an adjustable brake system which is mounted on the right side of the transaxle.

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted.

- Depress clutch/brake pedal and engage parking brake.
- Measure distance between brake operating arm and nut "A" on brake rod.
- If distance is other than 1-1/2", disengage parking brake, loosen jam nut and turn nut "A" until distance becomes 1-1/2". Retighten jam nut against nut "A".
- · Engage parking brake and recheck distance.
- Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than six (6) feet in highest gear, further maintenance is necessary. Contact your nearest authorized service center.

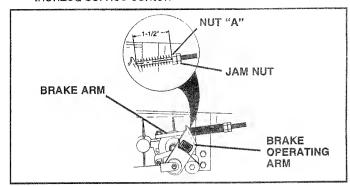


FIG. 30

TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 31)

- Remove mower (See "TO REMOVE MOWER" in this section of this manual).
- Remove mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Pull mower blade drive belt towards rear of mower at tensioning pulley. Place a block between tensioning pulley and mower lift bracket. Roll belt off tensioning pulley.
- Roll belt off all other pulleys.
- Slide belt from under spring.
- To install belt, reverse above procedure. Make sure belt is engaged in all pulleys.

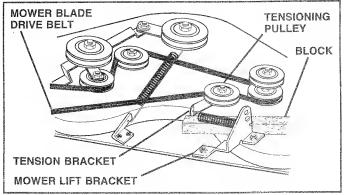


FIG. 31

TO REPLACE MOTION DRIVE BELT (See Fig. 32)

Park the tractor on level surface. Engage parking brake. For assistance, there is a belt installation guide decal on bottom side of left footrest.

- Remove mower (See "TO REMOVE MOWER" in this section of this manual.)
- Disconnect clutch wire harness.
- Remove clutch locator.
- Remove upper belt keeper.
- · Remove belt from stationary idler and clutching idler.
- Pull belt slack toward rear of tractor. Remove belt upwards from transaxle pulley by deflecting belt keepers.
- Pull belt toward front of tractor and remove downwards from around electric clutch.
- Install new belt by reversing above procedure.

IMPORTANT: MAKE SURE UPPER BELT KEEPER IS POSITIONED PROPERLY BETWEEN LOCATOR TABS AND ELECTRIC CLUTCH WIRE CONNECTION IS SECURE.

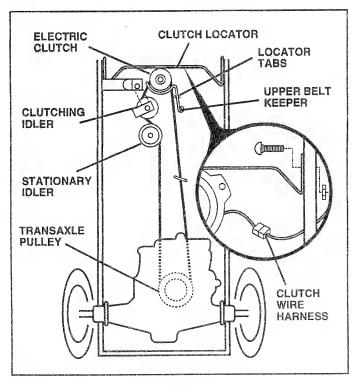


FIG. 32

TRANSAXLE SHIFTER LINKAGE AND AD-JUSTMENT (See Figs. 33 and 34)

The transaxle should be in neutral when the gearshift lever is in the neutral (lock gate) position. The adjustment is preset at the factory; however, if adjustment is needed, proceed as follows:

- Make sure transaxle is in neutral.
- Loosen two locknuts on tie rod.
- Turn center rod until gearshift lever falls into neutral lock gate on fender console.
- Tighten locknuts securely.

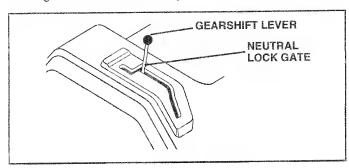


FIG. 33

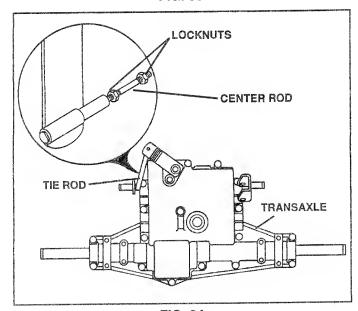


FIG. 34

TO ADJUST STEERING WHEEL ALIGNMENT

If steering wheel crossbars are not horizontal (left to right) when wheels are positioned straight forward, remove steering wheel and reassemble per instructions in the Assembly section of this manual.

FRONT WHEEL TOE-IN/CAMBER

The front wheel toe-in and camber are not adjustable on your tractor. If damage has occurred to affect the front wheel toe-in or camber, contact your nearest authorized service center.

TO REMOVE WHEEL FOR REPAIRS (See Fig. 35)

- Block up axle securely.
- Remove axle cover, retaining ring and washers to allow wheel removal (rear wheel contains a square key - Do not lose).
- Repair tire and reassemble.
- On rear wheels only: align grooves in rear wheel hub and axle. Insert square key.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover.

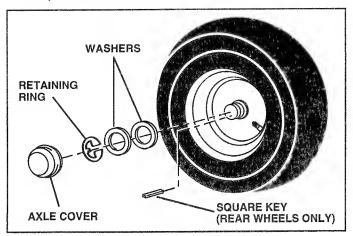


FIG. 35

TO REPLACE FUSE

Replace with 30 amp automotive-type plug-in fuse. The fuse holder is located behind the dash.

TO REPLACE HEADLIGHT BULB

- Raise hood.
- Pull bulb holder out of the hole in the backside of the grill.
- Replace bulb in holder and push bulb holder securely back into the hole in the backside of the grill.
- Close hood.

INTERLOCKS AND RELAYS

Loose or damaged wiring may cause your tractor to run poorly, stop running, or prevent it from starting.

 Check wiring. See the electrical wiring diagram in the Repair Parts section of this manual.

TO START ENGINE WITH A WEAK BATTERY (See Figs. 36 and 37)



CAUTION: Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

If your battery is too weak to start the engine, it should be recharged. If "jumper cables" are used for emergency starting, follow this procedure:

IMPORTANT: YOUR TRACTOR IS EQUIPPED WITH A 12 VOLT NEGATIVE GROUNDED SYSTEM. THE OTHER VEHICLE MUST ALSO BE A 12 VOLT NEGATIVE GROUNDED SYSTEM. DO NOT USE YOUR TRACTOR BATTERY TO START OTHER VEHICLES.

TO ATTACH JUMPER CABLES -

- Connect each end of the RED cable to the POSITIVE (+) terminal of each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGA-TIVE (-) terminal of fully charged battery.
- Connect the other end of the BLACK cable to a panel bolt on the left side of the chasis, away from the fuel tank and battery.

TO REMOVE CABLES, REVERSE ORDER -

- BLACK cable first from chassis and then from the fully charged battery.
- RED cable last from both batteries.

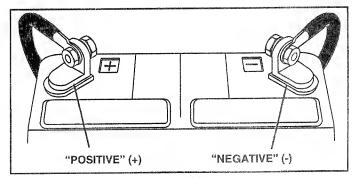


FIG. 36

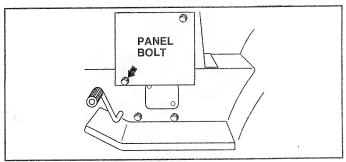


FIG. 37

TO REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 38)

- · Lift hood. Disconnect headlight wire connection.
- · Remove wing nuts on inside of side panels.
- Pivot hood and side panel forward and lift off tractor.
- To replace, reverse above procedure.

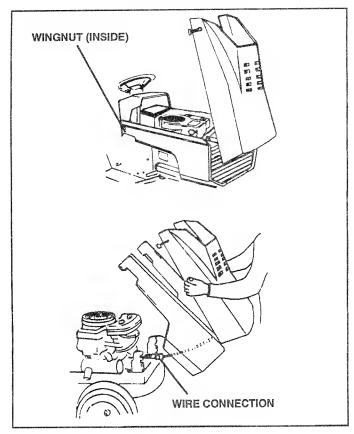


FIG. 38

ENGINE

TO ADJUST THROTTLE CONTROL CABLE (See Fig. 39)

The throttle control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- With engine not running, move throttle control lever to "FAST" position.
- Check that swivel is against side of quarter circle. If it is not, loosen cable clamp screw and pull cable back until swivel is against quarter circle. Tighten cable clamp screw securely.

TO ADJUST CHOKE CONTROL (See Fig. 40)

The choke control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:

- With engine not running, move choke control (located on dash panel) to full "CHOKE" position.
- Remove air cleaner cover, filter and spitback plate to expose carburetor choke (see "AIR FILTER" in Customer Responsibilities section).
- Choke should be closed. If it is not, loosen casing clamp screw and move choke cable until choke is completely closed. Tighten casing clamp screw securely.
- · Reassemble air cleaner.

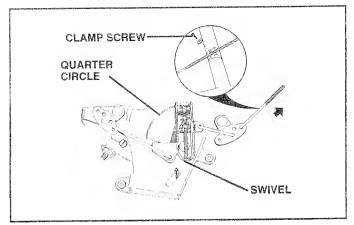


FIG. 39

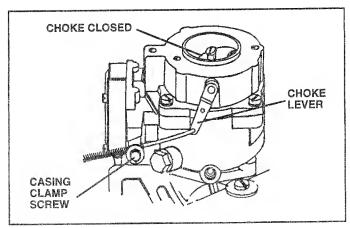


FIG. 40

TO ADJUST CARBURETOR

The carburetor has been present at the factory and adjustment should not be necessary. However, minor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If the carburetor does not need adjustment, see the engine manual packed with your tractor.

High speed stop is factory adjusted. Do not adjust-damage may result.

IMPORTANT: NEVER TAMPER WITH THE ENGINE GOVERNOR, WHICH IS FACTORY SET FOR PROPER ENGINE SPEED. OVERSPEEDING THE ENGINE ABOVE THE FACTORY HIGH SPEED SETTING CAN BE DANGEROUS. IF YOU THINK THE ENGINE-GOVERNED HIGH SPEED NEEDS ADJUSTING, CONTACT YOUR NEAREST AUTHORIZED SERVICE CENTER, WHICH HAS PROPER EQUIPMENT AND EXPERIENCE TO MAKE ANY NECESSARY ADJUSTMENTS.

STORAGE

Immediately prepare your tractor for storage at the end of the season or if the tractor will not be used for 30 days or more.



CAUTION: Never store the tractor with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

TRACTOR

Remove mower from tractor for winter storage. When mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- Clean entire tractor (See "CLEANING" in the Customer Responsibilities section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- Lubricate as shown in the Customer Responsibilities section of this manual.
- Be sure that all nuts, bolts and screws are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
- Touch up all rusted or chipped paint surfaces; sand lightly before painting.

BATTERY

- Fully charge the battery for storage.
- After a period of time in storage, battery may require recharging.
- To help prevent corrosion and power leakage during long periods of storage, battery cables should be disconnected and battery cleaned thoroughly (see "TO CLEAN BATTERY AND TERMINALS" in the Customer Responsibilities section of this manual).
- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- Be sure battery drain tube is securely attached.
- If battery is removed from tractor for storage, do not store battery directly on concrete or damp surfaces.

ENGINE

FUEL SYSTEM

IMPORTANT: IT IS IMPORTANT TO PREVENT GUM DEPOSITS FROM FORMING IN ESSENTIAL FUEL SYSTEM PARTS SUCH AS CARBURETOR, FUEL FILTER, FUEL HOSE, OR TANK DURING STORAGE. ALSO, EXPERIENCE INDICATES THAT ALCOHOL BLENDED FUELS (CALLED GASOHOL OR USING ETHANOL OR METHANOL) CAN ATTRACT MOISTURE WHICH LEADS TO SEPARATION AND FORMATION OF ACIDS DURING STORAGE. ACIDIC GAS CAN DAMAGE THE FUEL SYSTEM OF AN ENGINE WHILE IN STORAGE.

- Drain the fuel tank.
- Start the engine and let it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

NOTE: Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using fuel stabilizer.

ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See "ENGINE" in the Customer Responsibilities section of this manual).

CYLINDERS

- Remove spark plug(s).
- Pour one ounce of oil through spark plug hole(s) into cylinder(s).
- Turn ignition key to "START" position for a few seconds to distribute oil.
- Replace with new spark plug(s).

OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust.
 Rust and/or dirt in your gasoline will cause problems.
- If possible, store your tractor indoors and cover it to give protection from dust and dirt.
- Cover your tractor with a suitable protective cover that does not retain moisture. Do not use plastic. Plastic cannot breathe which allows condensation to form and will cause your tractor to rust.

IMPORTANT: NEVER COVER TRACTOR WHILE ENGINE AND EXHAUST AREAS ARE STILL WARM.

TROUBLESHOOTING POINTS

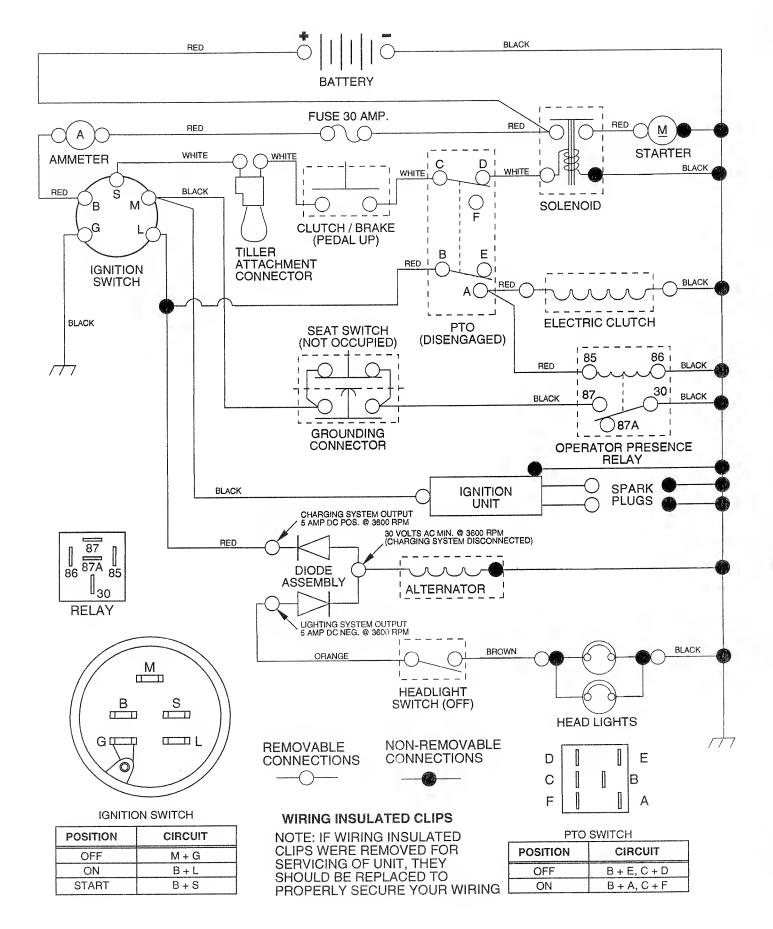
PROBLEM	CAUSE	CORRECTION
Will not start	 Out of fuel. Engine not "CHOKED" properly. Engine flooded. Bad spark plug. Dirty air filter. Dirty fuel filter. Water in fuel. Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. 	 Fill fuel tank. See "TO START ENGINE" in Operation section. Wait several minutes before attempting to start. Replace spark plug. Clean/replace air filter. Replace fuel filter. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Check all wiring. Contact an authorized service center/department. Contact an authorized service center/department.
Hard to start	1. Dirty air filter. 2. Bad spark plug. 3. Weak or dead battery. 4. Dirty fuel filter. 5. Stale or dirty fuel. 6. Loose or damaged wiring. 7. Carburetor out of adjustment. 8. Engine valves out of adjustment.	 Clean/replace air filter. Replace spark plug. Recharge or replace battery. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Check all wiring. Contact an authorized service center/department. Contact an authorized service center/department.
Engine will not turn over	 Clutch/brake pedal not depressed. Attachment clutch is engaged. Weak or dead battery. Blown fuse. Corroded battery terminals. Loose or damaged wiring. Faulty ignition switch. Faulty solenoid or starter. Faulty operator presence switch(es). 	 Depress clutch/brake pedal. Disengage attachment clutch. Recharge or replace battery. Replace fuse. Clean battery terminals. Check all wiring. Check/replace ignition switch. Check/replace solenoid or starter. Contact an authorized service center/department.
Engine clicks but will not start	Weak or dead battery. Corroded battery terminals. Loose or damaged wiring. Faulty solenoid or starter.	Recharge or replace battery. Clean battery terminals. Check all wiring. Check/replace solenoid or starter.
Loss of power	1. Cutting too much grass/too fast. 2. Throttle in "CHOKE" position. 3. Build-up of grass, leaves and trash under mower. 4. Dirty air filter. 5. Low oil level/dirty oil. 6. Faulty spark plug. 7. Dirty fuel filter. 8. Stale or dirty fuel. 9. Water in fuel. 10. Spark plug wire loose. 11. Dirty engine air screen/fins. 12. Dirty/clogged muffler. 13. Loose or damaged wiring. 14. Carburetor out of adjustment. 15. Engine valves out of adjustment.	 Set in "Higher Cut" position/reduce speed. Adjust throttle control. Clean underside of mower housing. Clean/replace air filter. Check oil level/change oil. Clean and regap or change spark plug. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. Connect and tighten spark plug wire. Clean engine air screen/fins. Clean/replace muffler. Check all wiring. Contact an authorized service center/department. Contact an authorized service center/department.
Excessive vibration	Worn, bent or loose blade. Bent blade mandrel. Loose/damaged part(s).	Replace blade. Tighten blade bolt. Replace blade mandrel. Tighten loose part(s). Replace damaged parts.

TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION		
Engine continues to run when operator leaves seat with attachment clutch engaged	Faulty operator-safety presence control system.	Check wiring, switches and connections. If not corrected, contact an authorized service center/ department.		
Poor cut - uneven	 Worn, bent or loose blade. Mower deck not level. Buildup of grass, leaves, and trash under mower. Bent blade mandrel. 	 Replace blade. Tighten blade bolt. Level mower deck. Clean underside of mower housing. Replace blade mandrel. 		
Mower blades will not rotate	 Obstruction in clutch mechanism. Mower drive belt out of adjustment. Worn/damaged mower drive belt. Frozen idler pulley. Frozen blade mandrel. 	 Remove obstruction. Adjust mower drive belt. Replace mower drive belt. Replace idler pulley. Replace blade mandrel. 		
Poor grass discharge	 Engine speed too slow. Travel speed too fast. Wet grass. Mower deck not level. Low/uneven tire air pressure. Worn, bent or loose blade. Buildup of grass, leaves and trash under mower. Mower drive belt wom or out of adjustment. Blades improperly installed. Improper blades used. 	1. Place throttle control in "FAST" position. 2. Shift to slower speed. 3. Aliow grass to dry before mowing. 4. Level mower deck. 5. Check tires for proper air pressure. 6. Replace/sharpen blade. Tighten blade bolt. 7. Clean underside of mower housing. 8. Replace/adjust mower drive belt. 9. Reinstall blades sharp edge down. 10. Replace with blades listed in this manual.		
Headlight(s) not working (if so equipped)	 Switch is "OFF". Bulb(s) burned out. Faulty light switch. Loose or damaged wiring. Blown fuse. 	1. Turn switch "ON". 2. Replace bulb(s). 3. Check/replace light switch. 4. Check wiring and connections. 5. Replace fuse.		
Battery will not charge	 Bad battery cell(s). Poor cable connections. Faulty regulator (if so equipped). Faulty alternator. 	 Replace battery. Check/clean all connections. Replace regulator. Replace alternator. 		
Engine "backfires" when turning engine "OFF"	Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine.	Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.		

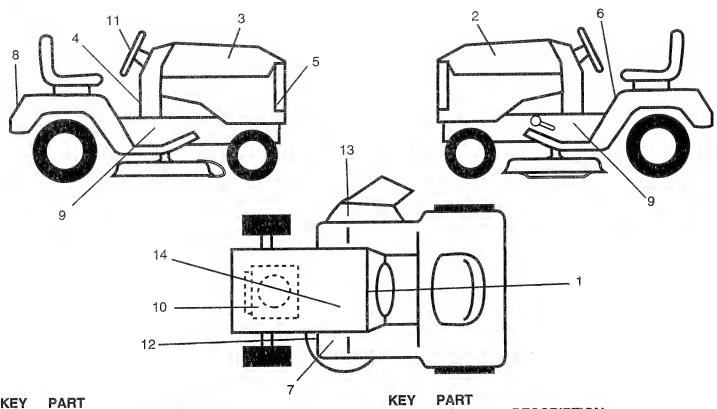
18 HP 44" TRACTOR - - MODEL NUMBER X1844A

SCHEMATIC



18 HP 44" TRACTOR - - MODEL NUMBER X1844A

DECALS

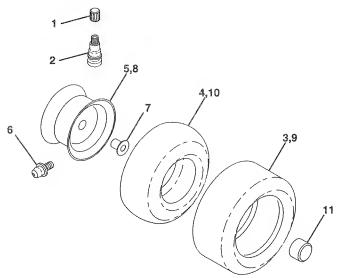


NO.	NO.	DESCRIPTION
1	138956	Decal, Operating Instructions
2	128018	Decal, Hood, LH
3	128015	Decal, Hood, RH
4	138956	Decal Dash Inst.
5	128007	Decal Grille
6	133795	Decal, Caution
7	101892X	Decal, Clutch/Brake
8	128006	Decal Fender
9	134545	Decal Chassis
	135426	Decal, Engine B&S 18 HP

NO. NO.		NO.	DESCRIPTION
	11	128009	Decal, Steering Wheel Insert
	12	136834	Decal V-Belt Schematic
	13	137259	Decal Warning
	14	121549X	Decal Caution
		138311	Decal, Handle Lift
	MP 80	139700	Manual, Owner's
	Avail	able access	sories (not included with tractor):
		SB10	40" Snow Blower
		LC02	42" Snow Blade
		TA321	55 lb. Wheel Wts. (ea.)
		TX11	Sleeve Hitch
		LA028	Tire Chains 23 x 8.5 x 12
		TS15	P.T.O. Tiller
		TDAG	1011 Dames Dlanda

TR69

WHEELS AND TIRES



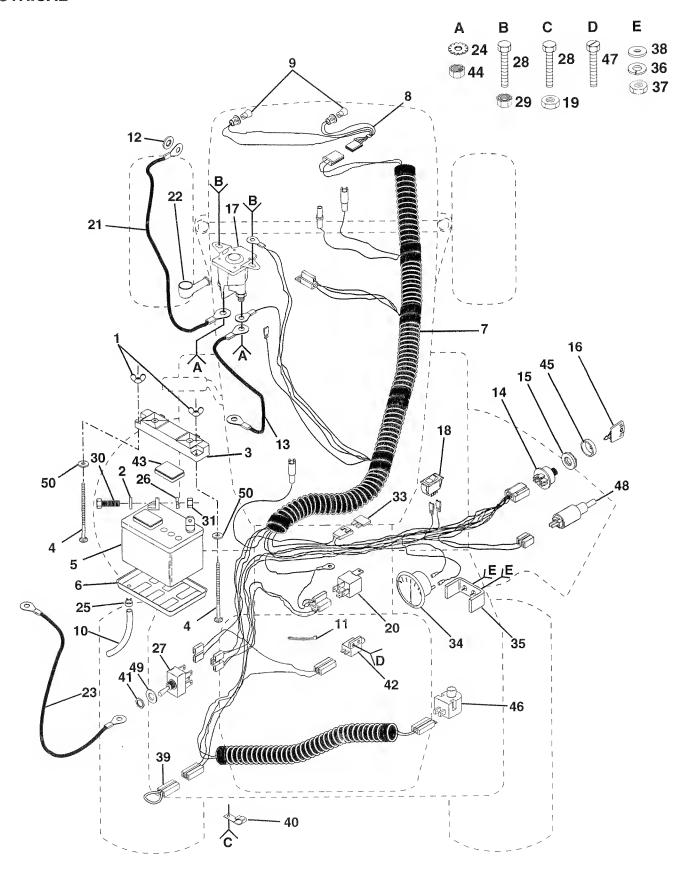
KEY NO.	PART NO.	DESCRIPTION
5 6 7 8 9	59192 65139 106222X 59904 106732X475 278H 9040H 124074X475 124106X 7154J 104757X	Valve Cap, Tire Stem, Valve Tire, Front Tube, Front (Service Item Only) Rim Assembly, Front Fitting, Grease (Front Wheel Only) Bearing, Flange (Front Wheel Only) Rim Assembly, Rear Tire, Rear Tube, Rear (Service Item Only) Cap, Axle, Black 1.50 x 1.00

48" Dozer Blade

NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

ELECTRICAL



18 HP 44" TRACTOR - - MODEL NUMBER X1844A

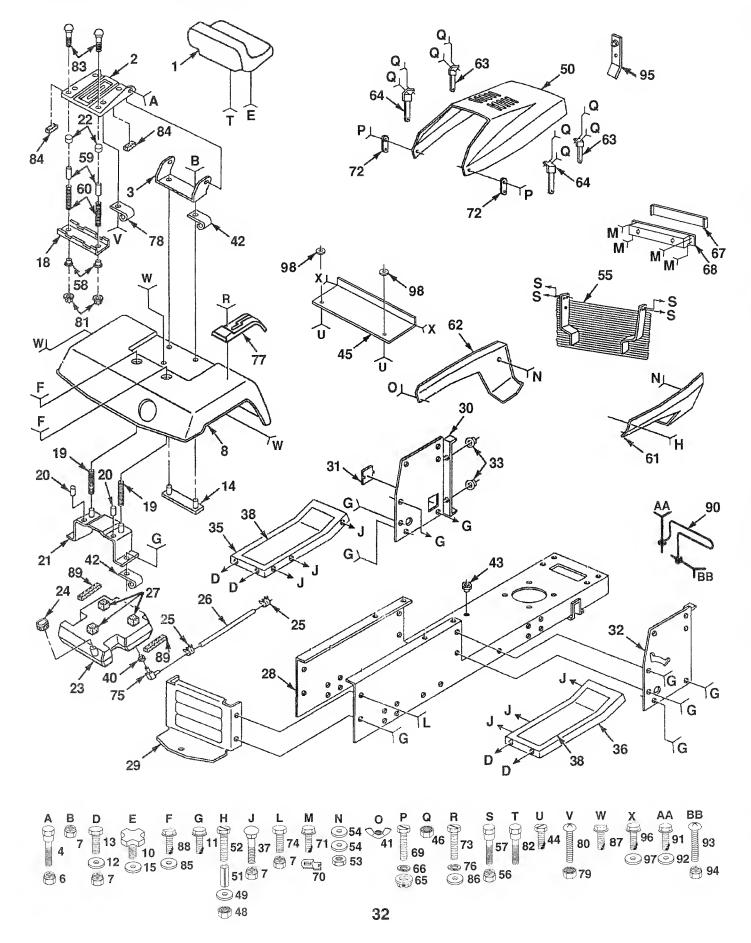
ELECTRICAL

KEY PA		CRIPTION
1 12319 2 1909 3 1024 4 7224 5 1215 6 7603 7 1388 8 1368 9 7662 10 7697 11 7192 12 1115 13 4206 14 4406 15 1242 16 1221 17 1384 18 1107 19 7368 20 1097 21 4799 22 1315 23 4207 24 1009 25 1095 26 1004 27 1260 28 7111 29 7364 20 31 7322 31 1050 33 1088 34 9433 35 1317 36 1010 37 7391 38 1907 39 1025 40 235R 41 4022 44 7335 40 41 41 4022 44 7335 45 1236 46 12136 47 17021 48 13566	1016 Wash 76X Guard 76X Batte 77X Batte 77 Batte	Battery ess, Ignition ess, Light Socket Light , Battery Tray e Tie her, Lock Internal Tooth 1/4 e, Battery (Battery to Solenoid) h, Ignition gnition Molded hold hold holded hold hold holded hold holded hold holded hold holded hold holded hold hold holded hold hold holded hold holded hold hold holded hold hold holded hold hold hold hold hold hold hold hol
49 19171 50 19121		ner 17/32 x 3/4 x 16 Ga. ner 3/4 x 1 x 18 Ga.

NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

CHASSIS AND ENCLOSURES



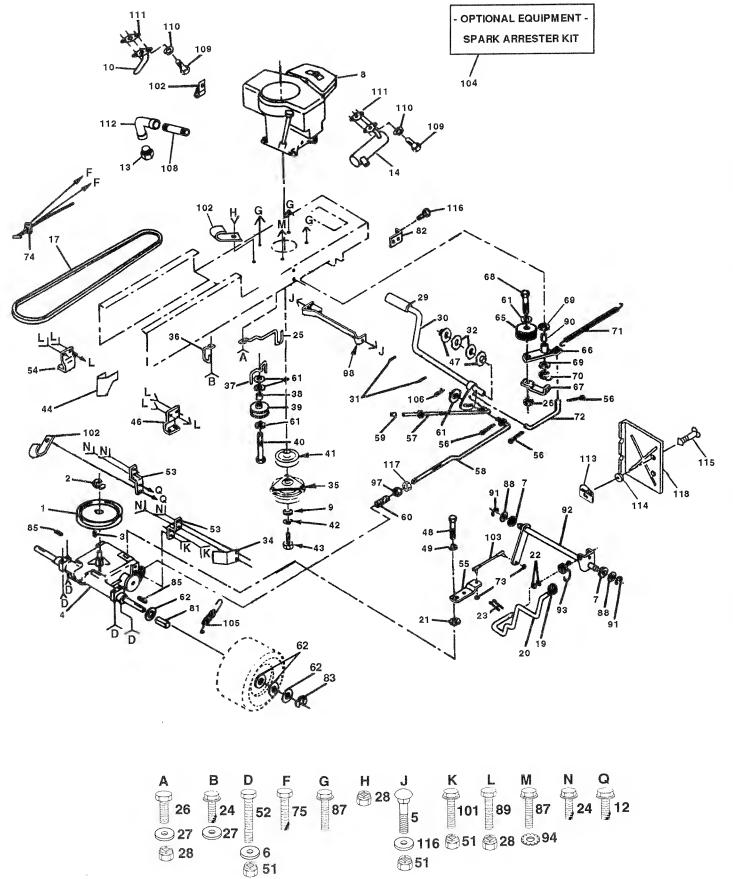
18 HP 44" TRACTOR - - MODEL NUMBER X1844A

CHASSIS AND ENCLOSURES

	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1 2 3 4 6 7 8 10 11	127429 131451 126656X 105529X 73680500 73680600 123784X475 120068X 17490612	Seat Pan, Seat Bracket, Pivot, Seat Bolt, Shoulder 5/16-18 Nut, Crownlock 5/16-18 Nut, Crownlock 3/8-16 Fender Knob, Seat Screw, Hex Washer Head, Thd.	59 60 61 62 63	131681 73680400 123481X 121248X 121249X 123740X 132639X475 132638X475	Grille Nut, Crownlock 1/4-20 Bolt, Shoulder 1/4-20 Bushing, Snap Spacer, Split Spring, Compression Panel, Side, RH Panel, Side, LH Strap Assembly, Hinge, Front
12 13 14 15 18 19 20 21 22 23 24 25 26	19131312 74760612 105511X 19171912 121246X 124181X 105531X 137113 124238X 127334X 127334X 123549X 123487X 7834R	Roll. 3/8-16 x 3/4 Washer 13/32 x 13/16 x 12 Gauge Bolt, Hex 3/8-16 x 3/4 Strap, Fender Washer 11/32 x 13/16 x 12 Gauge Bracket, Switch, Seat Spring, Compression Nut, Push Bracket, Fender Cap, Spring, Seat Tank, Fuel Cap, Fuel Clamp, Hose Line, Fuel	65 66 67 68 69 70 71 72 73 74 75 76	106784X 2029J 10071000 106395X 124392X417 74191008 104755X 17211010 109808X 74640806 74760612 139227 10100800 123825X	Screw, Machine #10-24 x 1/2 "J" Fastener Screw, Hex Washer Head, Tapping Latch, Chute Screw #8 x 3/8 Bolt, Hex 3/8-16 x 3/4 Stem, Fuel Tank Washer, Lock #8 Console, Shifter
27 28 29 30	106082X 127166X 123785X 138644	Pad, Spacer Chassis Assembly Drawbar Panel, Dash, LH	79 80	4171R 73951000 74641008	Clip, Insulated Nut, Keps #10-24 Screw, Slotted Pan Head #10-24 x 1/4
31 32 35 36 37 38 40 41		Cover, Access Bushing, Snap Footrest, LH Footrest, RH Bolt, Carriage 3/8-16 x 3/4 Pad, Footrest Bushing Wing Nut. Plastic, Locking, 1/4-20	84 85 86	123976X 127018X 72050411 121251X 19131614 19060718 17490608	Nut, Hex, Flange, Large Bolt, Shoulder Bolt, Carriage 1/4-20 x 1-3/8 Strip, Foam Washer 13/32 x 1 x 14 Gauge Washer 3/16 x 7/16 x 18 Gauge Screw Thdrol 3/8-16 x 1/2
42 43 44 45 46 48 49 50	2751R 110436X 17490512 105419X475 73510400 73731000 19070818	Nut, Keps 1/4-20 Nut, Keps #10-24 Washer 7/32 x 1/2 x 18 Gauge	91 92 93 94 95	132644	Screw Thdrol 5/16-18 x 1/2 Pad Spacer Guard Muffler Screw Thdrol 3/8-16 x 1 Washer 13/32 x 1 x 16 Ga. Bolt Rdhd Sqnk 3/8-16 x 1 Gr. 5 Nut, Crownlock 3/8-16 Bracket Grille
50 51 52 53 54	132635X475 7206J 74981020 73220400 19091216	Hood Spacer, Split Screw, Machine #10-24 x 1-1/4 Nut, Hex, Fin. 1/4-20 Washer 9/32 x 3/4 x 16 Gauge	97 98	17490412 19091016 19131210 E: All compon	Screw Hexwash Washer 9/32 x 5/8 x 16 Ga. Washer 13/32 x 3/4 x 10 Ga. ent dimensions given in U.S. inches

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

DRIVE



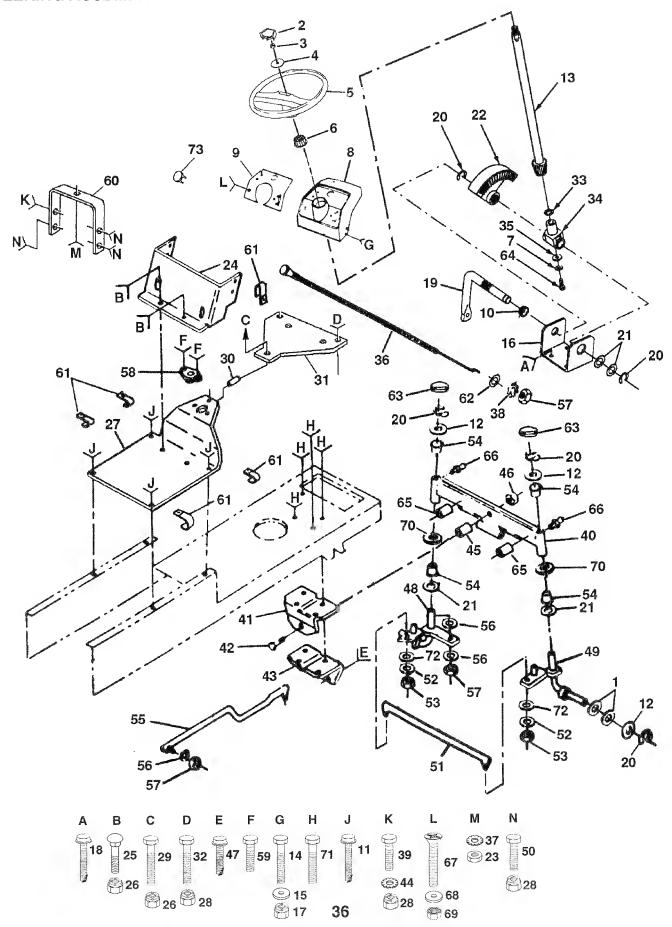
18 HP 44" TRACTOR - - MODEL NUMBER X1844A

DRIVE

	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
1 2 3 4	121327X 12000004 2228M 138788	Pulley, Transaxle Ring, Retainer Key, Woodruff #9 Transakle, Peerless, 6 Speed,	57 58 59 60	133261 123786X 71673 126909X	Rod, Parking Brake Rod, Brake Cap, Plunger Spring, Brake Rod
5 6 7 8	72140506 19111214 71208	Model Number 820-016B Bolt, Carriage 5/16-18 x 3/4 Washer 11/32 x 3/4 x 14 Ga. Bushing, Rod, Steering Engine, B&S, 18 HP, Model No. 422707	62 65 66 67	19131316 123800X 127783 123789X 123205X	Washer 13/32 x 13/16 x 16 Gauge Washer 1-1/32 x 1-5/8 x 16 Gauge Pulley, Idler Arm, Idler Retainer, Belt
9 10 12	126197X 100229L 17490512	Washer 15/32 x 1-3/4 x 1/4 Tube, Exhaust Screw, Hex Wash Head 5/16-18 x 2-1/2	69 70 71	74760624 110812X 12000039 105709X 105710X	Bolt, Hex Head 3/8-16 x 1-1/2 Washer, Hardened Ring, Clip Spring, Return, Clutch Link, Clutch
13 14 17	108373X 123796X	Plug, Oil Drain (Order from Engine Manufacturer) Muffler V-Belt, Drive	73 74	73530400 132747 17720410	Nut 1/4-28 Control, Throttle Screw, Hex Head, Thread Cutting
19 20 21 22	106933X 123781X 105701X 19171216 76020416 17490612	Knob Rod, Shifter Washer, Shift Plate Washer 17/32 x 3/4 x 16 Gauge Pin, Cotter 1/8 x 1 Screw, Hex Washer Head, Thd.,	82 83	108097X 108236X 12000053 9396E 17490624	1/4-20 x 5/8 Spacer, Split Bracket, Switch E-Ring Key, Square 1/4 x 2 Screw, Hex Washer Head, Thd., Roll. 3/8-16 x 1-1/2
26 27 28 29 30 31 32 34 35 36 37 38 39 40 41 42 43 44 46 47 48 49 51 52 53 54 55 55 56 56 57 57 57 57 57 57 57 57 57 57 57 57 57	129921 74760616 19131312 73680600 8883R 122424X 1572H 19211616 123792X 137140 136715 109070X 4470J 123674X 74760644 136906 10040700 71170768 123791X 123776X 120183X 71040412 19091216 73680500 74780544 123787X 123780X 123794X 76020412	Spacer Idler, Flat Bolt, Hex 3/8-16 x 2-3/4 Pulley, Engine Washer, Lock 7/16 Bolt, Hex Head 7/16-20 x 4-1/4 Keeper, Belt, Transaxle, LH Bracket, Transaxle, RH Bearing, Nylon Bolt, Hex Head 1/4-28 x 3/4 Washer 9/32 x 3/4 x 16 Gauge Nut, Crownlock 5/16-18 Bolt, Hex 5/16-18 x 2-3/4 Strap, Torque Bracket, Transaxle, LH Arm, Shifter	89 90 91 92 93 94 97 98 101 102 103 104 105 106 108 109 110 111 112 113 114 115 116 117 118 119	19212016 74760612 105706X 12000008 123772X 123782X 11050600 73800600 137141 74760540 2751R 123793X 121851X 110422X 4497H 13280336 74780412 10040400 8545J 13200300 105839X 105838X 123650X 17021008 73350600 133746 19111012	Washer 21/32 x 1-1/4 x 16 Gauge Bolt, Hex Head 3/8-16 x 3/4 Bearing Ring, Klip Shaft Assembly, Shifter Spring, Torsion Washer, Lock, External Tooth 3/8 Locknut 3/8-16 Retainer Assembly, Clutch Screw, Hex Washer Head, Thd., Roll. 5/16-18 x 2-1/2 Clip, Fuel Line Rod, Tie Spark Arrester Kit Spring, Brake Return Clip, Hair Pin Nipple, Pipe Bolt Fin Hex 1/4-20 x .75 Washer, Lock 1/4 Gasket Muffler Elbow, Pipe, STD 90° Receptacle 1/4 Turn Retainer 1/4 Turn Stud 1/4 Turn Screw Nut, Hex, Jam 3/8-16 Shield Heat Elect. Washer 11/32 x 5/8 x 12 Ga.
56	76020412	Pin, Cotter 1/8 x 3/4	NOT	E: All compone 1 inch = 25.4	ent dimensions given in U.S. inches 4 mm

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

STEERING ASSEMBLY



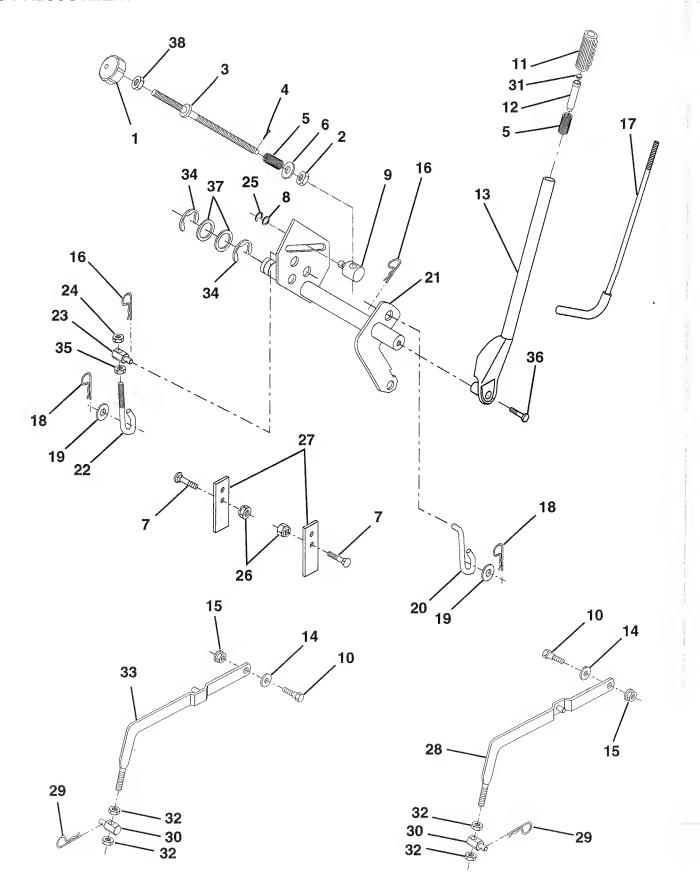
18 HP 44" TRACTOR - - MODEL NUMBER X1844A

ERING ASSEMBLY

PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
121749X 126805X	Washer 25/32 x 1-1/4 x 16 Gauge Insert, Steering Wheel	38	11050600	Washer, Lock, Internal/External Tooth 3/8
73940800	Nut, Hex, Jam, Top Lock	39	74760616	Bolt, Fin, Hex 3/8-16 x 1
10071016	1/2-20 UNF	40	108075X	Axle, Front
100712K	Washer	41	105663X	Support, Saddle, Rear
121472X	Steering Wheel	42	74761060	Bolt, Hex 5/8-11 x 3-3/4
100711L 10040400	Adapter, Steering Wheel	43	105664X	Support, Saddle, Front
124252X	Washer, Lock 1/4 Dash	44 45	11050600 110438X	Washer, Lock, External Tooth
121444X020	Dash Plate	45 46	73901000	Spacer, Bearing, Front Axle Locknut, Flanged 5/8-11 UNC
109816X	Nyliner, Snap-In	47	17490508	Screw, Hex Washer Head, Thd.,
17490608	Screw, Hex Washer Head, Thd.,	77	17490300	Roll. 5/16-18 x 1/2
.,	Roll. 3/8-16 x 1/2	48	135227	Spindle, LH
121748X	Washer 25/32 x 1-5/8 x 16 Gauge	49	135228	Spindle, RH
128762	Shaft, Steering	50	74760612	Bolt, Fin, Hex 3/8-16 x 3/4
74760616	Bolt, Hex 3/8-16 x 1	51	130467	Rod, Tie
19131312	Washer 13/32 x 13/16 x 12 Gauge	52	10040500	Washer, Lock 5/16
124036X	Bracket, Steering	53	73810500	Nut, Hex 5/16-24
73680600	Nut, Crownlock 3/8-16	54	3366R	Bearing
17490612	Screw, Hex Washer Head, Thd.,	55	130468	Link, Drag
407504	Roll. 3/8-16 x 3/4	56	10040600	Washer, Lock 3/8
127501	Shaft, Pitman	57	73610600	Nut, Hex 3/8-24
12000029	Klip Ring	58	1554J	Bushing, Steering
6266H 136874	Bearing, Thrust Gear, Sector	59 60	17431008	Screw, Hex #10-16 x 1/2
73220400	Nut, Fin, Hex 1/4-20	61	124130X 2751R	Support, Dash
104805X	Dash, Lower	62	19131316	Clip, Fuel Line Washer 13/32 x 13/16 x 16 Gauge
74180512	Screw, Crown, Truss Head	63	121232X	Spindle, Cap
	5/16-18 x 3/4	64	71070410	Screw, Hex Socket Head
73680500	Nut, Crownlock 5/16-18	•		1/4 x 20 x 5/8
123783X016	Saddle	65	132624	Pin, Axle 5/8 x 1.55/1.54
73680600	Nut, Crownlock 3/8-16	6 6	6855M	Grease Zerk
74760532	Bolt, Hex 5/16-18 x 2	67	74180512	Screw, Pan Head 5/16-18 x 3/4
121236X	Spacer	68	19111116	Washer 13/32 x 11/16 x 16 Gauge
137654	Support, Battery	69	73510500	Nut, Keps 5/16-18
74760612	Bolt, Hex 3/8-16 x 3/4	70	19272016	Washer 27/32 x 1-1/4 x 16 Gauge
57079	Washer	71	122819X	Screw, Special 3/8-16 x 3/4
124035X	Shaft, Support	72	19111216	Washer 11/32 x 3/4 x 16 Gauge
126684X	Washer 5/8 x 1/4 x 16 Gauge	73	8022J	Plug Dash
132781 11050400	Control, Choke Washer, Lock, External Tooth	NOT	E: All compor	nent dimensions given in U.S. inches

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

LIFT ADJUSTMENT



18 HP 44" TRACTOR - - MODEL NUMBER X1844A

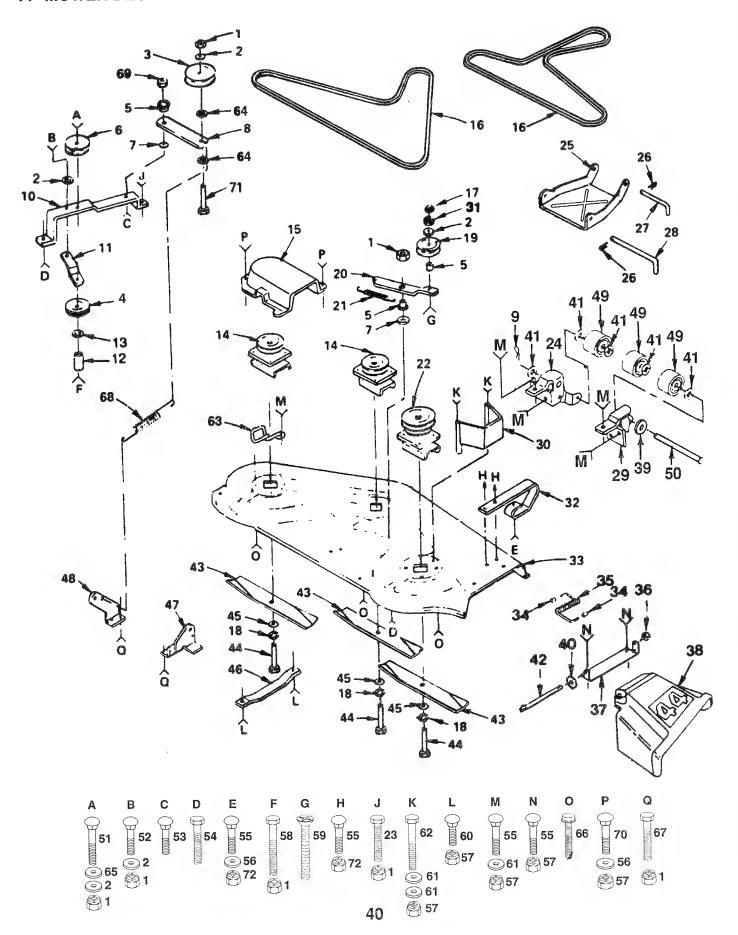
LIFT ADJUSTMENT

	PART NO.	DESCRIPTION
12345678901123456789 1112345678901123456789 1112345678901123456789 333333333333333333333333333333333333	110739X 73980600 4939M 121006X 4921H 19171516 110029X 131926 110448X 110447X 73710700 12000037 73680600 121252X 121598X 9135R 106308X 124526X 73220800 121599X 12000022	Knob, Infinite Height Adjustment Nut, Hex, Special Rod, Adjust, Lift Pin, Cotter 3/32 x 1/2 Spring Washer 13/32 x 5/8 x 16 Gauge Bolt, Carriage 3/8-16 x 1 Washer 15/32 x 3/4 x 16 Gauge Trunnion Bolt, Shoulder 3/8-16 Grip, Handle Plunger, Lever Lever, Lift (Includes Key No. 17) Washer, Spring Nut, Flangelock 3/8-16 Retainer, Spring Rod, Lever Retainer, Spring Washer 17/32 x 15/16 x 16 Gauge Link, Lift Shaft, Lift Link, Lift, Adjust Trunnion, Lift Nut, Crownlock 7/16-20 UNF Klip Ring Nut, Crownlock 3/8-16 Upstop Mower Arm, Suspension, RH Retainer Spring Trunnion, Lift, Lower Button, Plunger Nut, Hex, Fin. 1/2-13 Arm, Suspension, LH E-Ring Nut, Hex, Jam 7/16-20 Bolt, Hex 3/8-16 x 1-1/2 Washer 29/32 x 1-1/4 x 16 Gauge Nut, Hex, Jam 3/8-16

NOTE: All component dimensions given in U.S. inches 1 inch = 25.4 mm

18 HP 44" TRACTOR - - MODEL NUMBER X1844A

44" MOWER DECK

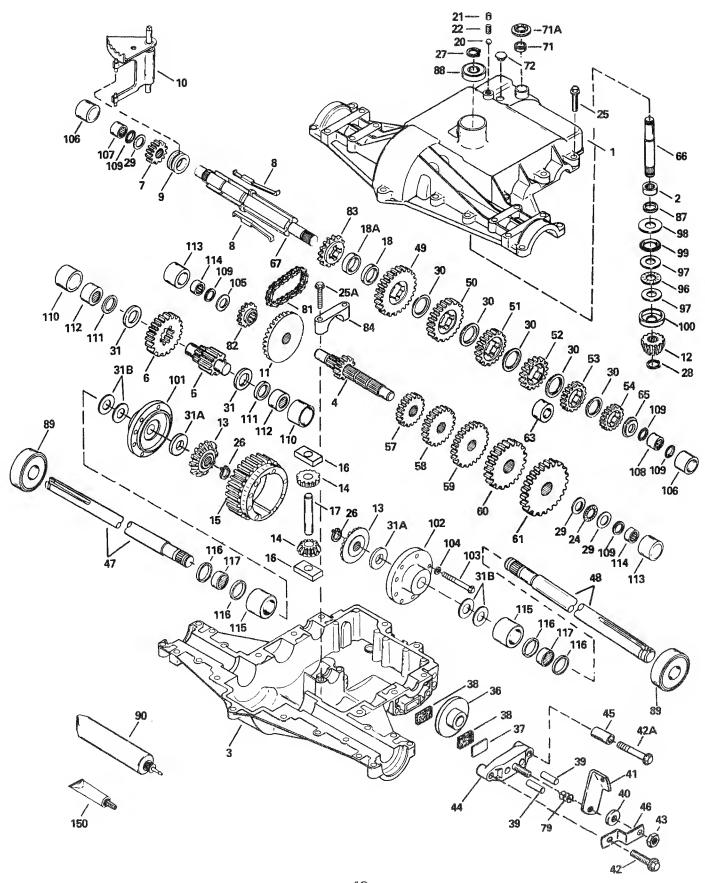


18 HP 44" TRACTOR - - MODEL NUMBER X1844A

44" MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.		DESCRIPTION
34 35 36	73680600 19131614 121316X 102403X 106902X 677A451 106513X 121425X 76020412 106523X 106522X 121236X 19131316 136818 106214X 106085X 73220600 10030600 102932X 106526X 7644J 121704X 74760616 109599X 105662X 4921H 105744X 109835X 109835X 109835X 109835X 109835X 109600X 108119X 109835X 109600X 108119X 10040600 136321 121423X 105304X 123713X 110452X 137607 109785X	Nut, Crownlock 3/8-16 Washer 13/32 x 1 x 14 Gauge Pulley, Idler Pulley, Idler Spacer Pulley, Idler Washer, Wear Arm, Idler Pin, Cotter 1/8 x 3/4 Bar, Support, Idler Brace, Idler, Deck Spacer Washer 13/32 x 13/16 x 16 Gauge Mandrel, Secondary Guard V-Belt Nut, Hex 3/8-16 Washer, Lock 3/8 Idler, Flat Arm, Idler, Mower Deck Spring, Extension Mandrel, Primary Bolt, Hex 3/8-16 x 1 Bracket, Lift, LH Link, Parallel Retainer, Spring Pln, Front Hinge Pin, Rear Hinge Bracket, Lift, RH Guard, Belt, RH Washer, Lock, Heavy Helical Spring Runner, RH Housing, Mower Cap, Sleeve Spring Nut, Push Bracket, Distances	39 40 41 42 43 44 45 46 47 48 49 55 55 55 55 55 55 56 66 66 66 67 77 72	19151616 19111016 19151610 106735X 106635X 74610624 19132012 7631J 123807X 123808X 109729X 109776X 72140614 72140608 72140612 74760620 72140506 19111116 73680500 74760648 74110632 72110505 19111216 74760580 121352X 19131210 19131410 17490612 72140606 102727X 73930600 72140620 1685H 121826X	Washer 15/32 x 1 x 16 Gauge Washer 15/32 x 1 x 10 Gauge Rod, Hinge Blade Bolt, Hex 3/8-24 x 1-1/2 Grade 5 Washer 13/32 x 1-1/4 x 12 Gauge Runner, LH Bracket, Suspension, Rear, RH Bracket, Suspension, Rear, LH Nose Roller Pin, Pivot Bolt, Carriage 3/8-16 x 1-3/4 Bolt, Carriage 3/8-16 x 1-1/2 Bolt, Carriage 3/8-16 x 1-1/2 Bolt, Carriage 5/16-18 x 3/4 Washer 11/32 x 11/16 x 16 Gauge Nut, Crownlock 5/16-18 Bolt, Carriage 5/16-18 x 5/8 Washer 11/32 x 3/4 x 16 Gauge Bolt, Hex 3/8-16 x 3 Screw, Flat Head 3/8-16 x 2 Bolt, Carriage 5/16-18 x 5/8 Washer 11/32 x 3/4 x 10 Gauge Bolt, Hex 5/16-18 x 5 Keeper, Mandrel, LH Washer 13/32 x 3/4 x 10 Gauge Washer 13/32 x 3/4 x 10 Gauge Screw, Hex Washer Head, Thd. Roll. 3/8-16 x 3/4 Bolt, Carriage 3/8-16 x 3/4 Sprlng, Extension Nut, Centerlock 3/8-16 Bolt, Carriage 5/16-18 x 3/4 Bolt, Carriage 5/16-18 x 3/4 Bolt, Carriage 3/8-16 x 2-1/2 Nut, Crownlock 5/16-18 Mower Deck, Complete
50	1007007	Guard, Discharge		1 inch = 25.	4 mm

18 HP 44" TRACTOR - - MODEL NUMBER X1844A TRANSAXLE PEERLESS - MODEL NUMBER 820-016B



18 HP 44" TRACTOR - - MODEL NUMBER X1844A

TRANSAXLE PEERLESS - MODEL NUMBER 820-016B

	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
NO123456789011234567890112345678901123456789011234567890112344567890112344567890112344567890112344567890112344567890112344567890112345678901123445678901123445678901123445678901123445678900112344567890112344678901123446789011234467890112344678901123446789011234467890112344678901123446789011234467890112344678901123446789011234467890112446789011244678901124467890112446789011244678901124467890112446789011246789011246789000000000000000000000000000000000000	NO. 794513 772098A 780155 770088 776291 776275 778247 778253 792138 784216 784342 778246 778245 778198 778198 778198 778197 778248 786027 786019 786121 786122 792077 792078 792078 792078 792078 792078 792078 792078 792078 792078 792078 792078 792078 792078 792079 780071 792078 792075 790025 786067	Transaxle, Complete Transaxle Cover Needle Bearing Transaxle Case Countershaft and Gear, 9 Teeth Output Shaft Output Gear, Steel, 35 Teeth Spur Gear, Steel, 15 Teeth Shift Key Shift Collar Shift Fork Bevel Gear, Steel, 33 Teeth Input Bevel Pinion, Steel, 13 Teeth Bevel Gear, Steel, 16 Teeth Bevel Gear, Steel, 10 Teeth Ring Gear Drive Block Drive Pin Neutral Spacer, .350/.340 Thick Netural Spacer, .276/.268 Thick Steel Ball, 5/16" Diameter Set Screw, 3/8-16 x 3/8" Spring Thrust Bearing Screw 5/16-18 x 1-1/4" Screw 1/4-20 x 1-1/4" Retaining Ring Retaining Ring Retaining Ring Retaining Ring Washer Washer Washer Washer Brake Disk Brake Pad Plate Brake Pad (Package of 2) Dowel Pin Washer Brake Lever Screw 1/4-20 x 1-1/4 Screw 1/4-20 x 2-1/4 Locknut 5/16-24 Brake Pad Holder Spacer	NO. 534789601566771A727981 82884878899697899100110231041051067111111111111111111111111111111111	778203A 778273 778136 778200 778201 778202 778208 780139 776274 776313 788069 792145 792074 792144 786081 786082 786123 786131 788042 780119 780050 788067B 780051 780165 788077 780166 774833 774834 792020 792006 780153 786144 780152 780150 792001 786142 780150 792001 786142 780151 786145 788070 780031	Spur Gear, Steel, 22 Teeth Spur Gear, Steel, 19 Teeth Spur Gear, Steel, 15 Teeth Spur Gear, Steel, 20 Teeth Spur Gear, Steel, 25 Teeth Spur Gear, Steel, 28 Teeth Spur Gear, Steel, 28 Teeth Spur Gear, Steel, 31 Teeth Washer Input Shaft Shifter and Brake Shaft Square Cut Ring Pushnut Threaded Plug 9/16-18 Spring Roller Chain (Number 41 Chain, 24 Links) Sprocket, 9 Teeth Reverse Sprocket, 18 Teeth Bearing Cap Oil Seal 3/4 Ball Bearing Grease, Bentonite, 32 Ounce Bottle Thrust Bearing Washer Washer "O" Ring Cupped Washer Differential Carrier Differential Carrier Screw 1/4-20 x 2-1/4 Lock Washer Washer Sleeve Needle Bearing Needle Bearing Sleeve Square Cut Ring Needle Bearing Sleeve Square Cut Ring Needle Bearing Sleeve Square Cut Ring Needle Bearing
47	786086 774832	Brake Lever Bracket Axle, 12-5/16" Long		510334	Gasket Eliminator (Loctite Number 515)
49	774831 778216A	Axle, 16-3/16" Long Spur Gear, Steel, 41 Teeth	Parts	must be ordere	ed from Tecumseh Products Co.
51	778206A 778205A	Spur Gear, Steel, 35 Teeth Spur Gear, Steel, 30 Teeth	NOTI		nt dimensions given in U.S. inches
52	778204A	Spur Gear, Steel, 25 Teeth		1 inch = 25.4	

SERVICE NOTES

SERVICE NOTES



SERVICE POLIGY



TECUMSEH

WARRANTY

Issued January 1980 Revised January 1991

LIMITED WARRANTIES FOR NEW PEERLESS GEAR POWER TRAIN COMPONENTS

A. Products Warranted

Peerless Gear and Machine Division of Tecumseh Products Company ("Tecumseh"), subject to the limitations contained below, will, at its option, repair or replace, without charge for parts or labor only, any part of a new Power Train Component (which as used herein means and includes the transaxle, gear box, transmission, differential and right angle drives, and any part of the Power Train Component), EXCEPT any new Power Train Component incorporated in equipment used for commercial or rental purposes, which is found upon examination by any Tecumseh Authorized Service Outlet or by Tecumseh's factory in Grafton, Wisconsin, to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP if received by Tecumseh or a Tecumseh Authorized Service Outlet for such examination within TWO YEARS from the date of sale to the original consumer purchaser of Peerless Series 820, 900, 910, 915, 920, 930 transaxles and Series 1100 angle drive and ONE YEAR for all other Peerless products. New Power Train Components incorporated in equipment used for NINETY (90) DAYS ONLY, and must be received by Tecumseh or by a Tecumseh Authorized Service Outlet for such examination within 90 days from the date of sale to the original purchaser. New Power Train Components are warranted for THIRTY (30) DAYS ONLY, and must be received by Tecumseh Authorized Service Outlet within 30 days from the date of sale to the original purchaser.

B. Products And Items Not Warranted

Alterations or Modifications of Power Train Components.

Accidents, Normal Maintenance, Failure to follow the Original Equipment Manufacturer's Manual.

This warranty covers only parts of new Power Train Components which are found upon examination to be defective in material or workmanship as delivered to the original purchaser. This warranty does not cover defects caused by depreciation or damage caused by normal wear, accidents, improper maintenance, improper use or abuse of the product, failure to follow the instructions contained in an instruction Manual for the operation of the Power Train Component and parts. The cost of normal maintenance and replacement of service items which are not defective shall be paid for by the original purchaser.

C. Securing Warranty Service

Warranty service can be arranged for by contacting either a Tecumseh Authorized Service Outlet (any Tecumseh Registered Service Dealer, Tecumseh Authorized Service Distributor, or Tecumseh Central Warehouse Distributor) or by contacting Tecumseh, c/o Service Manager, Engine and Transmission Group Service Division, 900 North Street, Grafton, Wisconsin 53024. Warranty service can only be performed by a Tecumseh Authorized Service Outlet or by Tecumseh at its factory in Grafton, Wisconsin. At the time of requesting warranty service, evidence must be presented of the date of sale to the original purchaser. The purchaser shall pay any charges for making service calls and/or for transporting the product to and from the place where the inspection and/or warranty work is performed. The purchaser shall be responsible for any damage or loss incurred in connection with the transportation of Power Train Components and/or part(s) of the Power Train Components submitted for inspection and/or warranty work.

D. Limitation of Damages and Implied Warranties

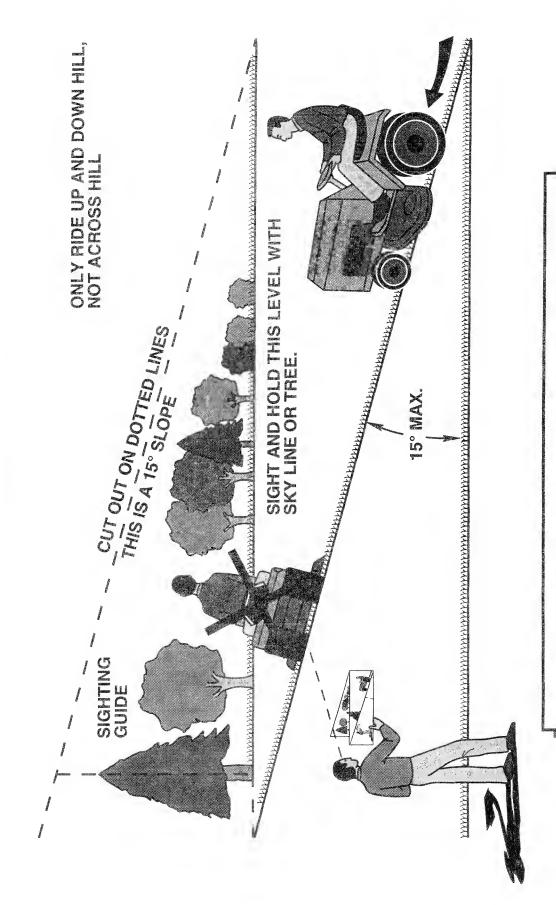
The foregoing EXPRESSED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. Neither Tecumseh nor any of its affiliates makes any warranties, representations or promises, written or oral, as to the quality of the Power Train Component or any of its

parts, other than as set forth herein.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT THAT EITHER MAY APPLY TO ANY PART(S) OF POWER TRAIN COMPONENTS, SHALL BE LIMITED IN DURATION TO THE PERIODS OF THE EXPRESSED WARRANTIES DEFINED IN PARAGRAPH A HEREOF. IN NO EVENT WILL TECUMSEH BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES AND/OR EXPENSES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

E. No Dealer Warranty

Tecumseh neither assumes nor authorizes any other person, natural or corporate, to assume for Tecumseh any other obligations or liabilities in connection with or with respect to any part(s) of a Power Train Component. The seller or dealer of part(s) of a Power Train Component has no authority, whatsoever, to make any representations or promises on behalf of Tecumseh or to modify the terms or limitations of Tecumseh's warranty in any way.



Operate your Tractor up and down the face of slopes (not greater than 15°), never across the face. Make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.